

# ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 6 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 01 Jul 2009	2. CONTRACT NO. (if any) QA133005CQ1035	6. SHIP TO: WG950123 a. NAME OF CONSIGNEE NATIONAL DATA BUOY CENTER
3. ORDER NO. 0040	4. REQUISITION/REFERENCE NO. NWWG9502-9-16285	b. STREET ADDRESS ATTN: PROPERTY OFFICER BUILDING 3202
5. ISSUING OFFICE Address correspondence to: WG950201 NATIONAL DATA BUOY CENTER BUILDING 1007 STENNIS SPACE CENTER, MS 39529		c. CITY STENNIS SPACE CENTER
KURT C. WEILBAECHER 228-688-2825 7. TO: 00004157 TIN: 953630868		d. STATE MS
a. NAME OF CONTRACTOR SCIENCE APPLICATIONS DUNS: 148095086		e. ZIP CODE 39529-6000
b. COMPANY NAME		f. SHIP VIA
c. STREET ADDRESS 10260 CAMPUS POINT DRIVE MAIL STOP G2		8. TYPE OF ORDER <input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY
d. CITY SAN DIEGO	e. STATE CA	f. ZIP 921211578
9. ACCOUNTING AND APPROPRIATION See Attached Schedule		10. REQUISITIONING OFFICE NOAA - NWS
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. Small <input checked="" type="checkbox"/> b. Other than small <input type="checkbox"/> c. Disadvantaged <input type="checkbox"/> d. Women-owned <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. Emerging small business <input type="checkbox"/> g. Service-disabled veteran-owned		
12. F.O.B. POINT DESTINATION		14. GOVERNMENT B/L NO.
13. PLACE OF: a. INSPECTION b. ACCEPTANCE		15. DELIVER TO F.O.B. POINT ON OR BEFORE 30 Jun 2010
		16. DISCOUNT TERMS 00.00% 0 Days Net 30

## 17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QTY ACCEPT. (g)

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	17(h) TOTAL (Cont. pages)	
	21. MAIL INVOICE TO:				
	a. NAME NATIONAL DATA BUOY CENTER			US\$ 404,939.75	17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) BUILDING 1007				
c. CITY STENNIS SPACE CENTER	d. STATE MS	e. ZIP CODE 39529			
22. UNITED STATES OF AMERICA BY (Signature) <i>Kurt Weilbaecher</i>			23. NAME (Typed) KURT C. WEILBAECHER 228-688-2825 (TITLE CONTRACTING/ORDERING OFFICER)		

# ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 6 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 01 Jul 2009	2. CONTRACT NO. (if any) QA133005CQ1035	6. SHIP TO: WG950123 a. NAME OF CONSIGNEE NATIONAL DATA BUOY CENTER
3. ORDER NO. 0040	4. REQUISITION/REFERENCE NO. NWWG9502-9-16285	b. STREET ADDRESS ATTN: PROPERTY OFFICE BUILDING 3202
5. ISSUING OFFICE Address correspondence to: WG950201 NATIONAL DATA BUOY CENTER BUILDING 1007 STENNIS SPACE CENTER, MS 39529		c. CITY STENNIS SPACE CENTER
KURT C. WEILBAECHER 228-688-2825		d. STATE MS
7. TO: 00004157 TIN: 953630868		e. ZIP CODE 39529-6000
a. NAME OF CONTRACTOR SCIENCE APPLICATIONS DUNS: 148095086		f. SHIP VIA
b. COMPANY NAME		8. TYPE OF ORDER
c. STREET ADDRESS 10260 CAMPUS POINT DRIVE MAIL STOP G2		a. PURCHASE
d. CITY SAN DIEGO		X b. DELIVERY
e. STATE CA		Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.
f. ZIP 921211578		
9. ACCOUNTING AND APPROPRIATION See Attached Schedule		10. REQUISITIONING OFFICE NOAA - NWS

11. BUSINESS CLASSIFICATION (Check appropriate box(es))  
☐ a. Small ☒ b. Other than small ☐ c. Disadvantaged ☐ d. Women-owned ☐ e. HUBZone ☐ f. Emerging small business ☐ g. Service-disabled veteran-owned

12. F.O.B. POINT DESTINATION	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE 30 Jun 2010	16. DISCOUNT TERMS 00.00% 0 Days  Net 30
13. PLACE OF a. INSPECTION b. ACCEPTANCE			

## 17. SCHEDULE (See reverse for Rejections)

ITEM NO.. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QTY ACCEPT. (g)

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17(h) TOTAL (Cont. pages)	
	21. MAIL INVOICE TO:					
	a. NAME NATIONAL DATA BUOY CENTER				US\$	17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) BUILDING 1007					
c. CITY STENNIS SPACE CENTER		d. STATE MS	e. ZIP CODE 39529		404,939.75	

22. UNITED STATES OF AMERICA BY (Signature) *Kurt C. Weilbaecher*

23. NAME (Typed) KURT C. WEILBAECHER 228-688-2825  
(TITLE CONTRACTING/ORDERING OFFICER)

OPTIONAL FORM 347 (REV. 4/2006)  
Prescribed by GSA/FAR 48 CFR 53.213(f)

# ORDER FOR SUPPLIES OR SERVICES - Continuation

PAGE

2

OF PAGES

6

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

01 Jul 2009

CONTRACT NO. (if any)

OA133005CO1035

ORDER NO.

0040

ITEM NO.

(a)

SUPPLIES OR SERVICES

(b)

QUANTITY  
ORDERED

(c)

UNIT  
(d)

UNIT PRICE

(e)

AMOUNT

(f)

QTY  
ACCEPT.

(g)

0001	<p>Base Period: 07/01/2009 - 12/31/2009</p> <p>DIRECT LABOR SFSC OPERATIONS (min fee)</p> <p>FFP</p> <p>FUNDED THROUGH 12/31/2009</p> <p>Accounting and Appropriation Data: 14.09.G8M5JR6.PCX.0089.040401012.200600 0092020000.25130000.000000 \$ 4,856.85 14.09.G8M8LAX.PPM.0089.040202003.20060 00092020000.25130000.000000 \$ 33,252.06 14.09.G8M5JGE.PUA.0089.040401005.20060 00092020000.25130000.000000 \$ 125,000.00 14.09.G8M8LAX.PWH.0089.040202003.2006 000092020000.25130000.000000 \$ 205,082.90</p>	1	JB	368,191.81	368,191.81	
0002	<p>ODCs CPFF (travel, training)</p> <p>FUNDED THROUGH 06/30/2010</p> <p>Accounting and Appropriation Data: 14.09.G8M8LAX.PPM.0089.040202003.20060 00092020000.25130000.000000 \$ 25,000.00</p>	1	JB	25,000.00	25,000.00	
0003	<p>DIRECT LABER EARNED FEE (TARGET)</p> <p>FUNDED THROUGH 12/31/2009</p> <p>Accounting and Appropriation Data: 14.09.G8M8LAX.PPM.0089.040202003.20060 00092020000.25130000.000000 [REDACTED]</p>	1	JB	[REDACTED]	[REDACTED]	
0004	<p>ODC Materials &amp; Subcontracting</p> <p>FFP</p> <p>FUNDED THROUGH 12/31/2009</p> <p>Accounting and Appropriation Data: 14.09.G8M8LAX.PPM.0089.040202003.20060 00092020000.25130000.000000 \$ 351.53</p> <p>Option 1: 01/01/2010 - 06/30/2010</p>	1	JB	351.53	351.53	

# ORDER FOR SUPPLIES OR SERVICES - Continuation

PAGE

3

OF PAGES

6

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

01 Jul 2009

CONTRACT NO. (if any)

OA133005CO1035

ORDER NO.

0040

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QTY ACCEPT. (g)
0005	DIRECT LABOR (Inclusive of Min Fee)	0	EA	0.00	0.00	
0006	ODCs CPFF (travel and training)	0	EA	0.00	0.00	
0007	DIRECT LABOR FEE (TARGET)	0	EA	0.00	0.00	
0008	ODCs Materials and Subcontracting	0	EA	0.00	0.00	
	FFP					
	Option 2: 06/30/2010 - 12/31/2010					
0009	DIRECT LABOR (Inclusive of Min Fee)	0	EA	0.00	0.00	
0010	ODCs CPFF (travel and training)	0	EA	0.00	0.00	
0011	DIRECT LABOR FEE (TARGET)	0	EA	0.00	0.00	
0012	ODCs Materials and Subcontracting	0	EA	0.00	0.00	
	FFP					
	FOB: Destination					
	The Technical Management Plan (TMP), dated 07/01/2009, control #1 is hereby attached and incorporated into this Task Order					
	General Conditions for Award:					
	1. The Government will receive consideration from the contractor for any vacancy that exceeds 30 days.					
	2. All training, travel, and other direct costs will be approved in advance by the COTR. Such approval will be submitted with the invoice for processing.					
	3. Initial Training Clause: Initial training of contractor employees will be accomplished in accordance with the terms and conditions of the task order and will be reimbursed under the ODC CLINs. However, if a vacancy occurs during the performance period of this task order and training is required for the vacated position, the					

OPTIONAL FORM 348 (10-83)

# AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

2. Amendment/Modification No. 0001	3. Effective Date Aug 20, 2009	4. Requisition/Purchase Req. No. NWWG9502-09-21835	1. Contract ID Code	Page 1	of Pages 2
6. Issued By NATIONAL DATA BUOY CENTER BUILDING 1007 STENNIS SPACE CENTER, MS 39529  KURT C.WEILBAECHER 228-688-2825		7. Administered By (If other than Item 6) SEE BLOCK 6	5. Project No. (if applicable)  Code <b>NDBC</b>  2009 AUG 24 A 10:17  <b>SSC, MS</b>		

8. Name and Address of Contractor (No., Street, County, and Zip Code)  SCIENCE APPLICATIONS INTERNATIONAL CORPO Vendor ID: 00004157 10260 CAMPUS POINT DRIVE DUNS: 148095086 MAIL STOP G2 SAN DIEGO CA 921211578 CAGE: 0T5L1	(X)	9A. Amendment of Solicitation No.
		9B. Date (See Item 11)
	X	10A. Modification of Contract/Order No. QA1330-05-CQ-1035 0040
		10B. Date (See Item 13) Jul 1, 2009

Code	Facility Code
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11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
 (a) By completing items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (if required) See Schedule \$ US 21,000.00
---

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACT/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.	
(x)	A. This change order is issued pursuant to: (Specify authority) The changes set forth in item 14 are made in the Contract Order No. in item 10A.
X	B. The above numbered Contract/Order is modified to reflect the administrative changes (such as changes in paying office, appropriation date, etc.) Set forth item 14, pursuant to the authority of FAR 43.103 (b)
	C. This supplemental agreement is entered into pursuant to authority of:
	D. Other (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

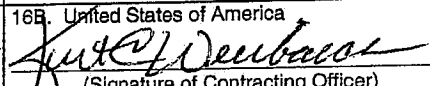
14. Description of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

1. The purpose of this modification is to add funds to CLIN 0002 (ODCs) in the amount of \$21,000.00 to cover equipment costs (tractor).

a. As a result, CLIN 0002 is changed from \$25,000.00 to read \$46,000.00, a net increase of \$21,000.00.  
 Accounting:  
 14.09.G8M5JR6.PCX.0089.040401012.2006000092020000.25130000.000000 \$21,000.00

2. The total funded amount is changed to \$446,939.75.

3. All other terms and conditions remain unchanged and in full effect.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.			
15A. Name and Title of Signer (Type or Print)	16A. Name and title of Contracting Officer (Type or Print) KURT C.WEILBAECHER 228-688-2825 Contracting Officer kurt.weilbaecher@noaa.gov		
15B. Contractor/Offoror	15C. Date Signed	16B. United States of America  (Signature of Contracting Officer)	16C. Date Signed Aug 20, 2009
(Signature of person authorized to sign)			

# SCHEDULE

Item No.	Supplies/Services	Quantity	Unit	Unit Price	Amount
0002	<p>ODCs CPFF (travel, training)</p> <p>FUNDED THROUGH 06/30/2010</p> <p>Including equipment costs</p> <p>Accounting and Appropriation Data:</p> <p>14.09.G8M5JR6.PCX.0089.040401012.200600009</p> <p>2020000.25130000.000000</p> <p>US\$ 21,000.00</p> <p>14.09.G8M8LAX.PPM.0089.040202003.200600000</p> <p>92020000.25130000.000000</p> <p>US\$ 25,000.00</p>	1	JB	46,000.00	46,000.00

## AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. Contract ID Code

Page 1 of Pages 12

2. Amendment/Modification No.  
00023. Effective Date  
Aug 20, 20094. Requisition/Purchase Req. No.  
NWWG9502-09-21188

5. Project No. (if applicable)

6. Issued By  
NATIONAL DATA BUOY CENTER  
BUILDING 1007  
STENNIS SPACE CENTER, MS 39529

Code WG950201

7. Administered By (If other than Item 6)  
SEE BLOCK 6

Code

NDBC

2009 AUG 24 A 10:17

KURT C. WEILBAECHER 228-688-2825

SSC, MS

8. Name and Address of Contractor (No., Street, County, and Zip Code)

SCIENCE APPLICATIONS INTERNATIONAL CORPO Vendor ID: 00004157  
10260 CAMPUS POINT DRIVE DUNS: 148095086  
MAIL STOP G2  
SAN DIEGO CA 921211578 CAGE: 0T5L1

(X)

9A. Amendment of Solicitation No.

9B. Date (See Item 11)

10A. Modification of Contract/Order No.

QA1330-05-CQ-1035 0040

10B. Date (See Item 13)

Jul 1, 2009

Code

Facility Code

## 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (if required)

See Schedule \$ US 20,374.77

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACT/ORDERS.  
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) A. This change order is issued pursuant to: (Specify authority) The changes set forth in item 14 are made in the Contract Order No. in item 10A.

X B. The above numbered Contract/Order is modified to reflect the administrative changes (such as changes in paying office, appropriation date, etc.) Set forth item 14, pursuant to the authority of FAR 43.103 (b)

C. This supplemental agreement is entered into pursuant to authority of:

D. Other (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. Description of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

1. The purpose of this modification is to add funds to CLIN 0002 (ODCs) in the amount of \$20,374.77 to cover additional equipment costs.

a. As a result, CLIN 0002 is changed from \$46,000.00 to read \$66,374.77, a net increase of \$20,374.77.

Accounting:

14.09.G8M5JR6.PCX.0089.040401012.2006000092020000.25130000.000000 \$20,374.77

2. The total funded amount is changed to read \$467,314.52

3. All other terms and conditions remain unchanged and in full effect.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name and Title of Signer (Type or Print)

16A. Name and title of Contracting Officer (Type or Print)

KURT C. WEILBAECHER 228-688-2825

Contracting Officer

kurt.weilbaecher@noaa.gov

15B. Contractor/Officer

15C. Date Signed

16B. United States of America

16C. Date Signed

(Signature of person authorized to sign)

(Signature of Contracting Officer)

NSN 7540-01-152-8070

30-105

STANDARD FORM 30 (REV. 10-83)

PREVIOUS EDITIONS UNUSABLE

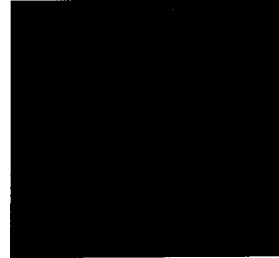
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**SCHEDULE**

Item No.	Supplies/Services	Quantity	Unit	Unit Price	Amount
0002	<p>ODCs CPFF (travel, training)</p> <p>FUNDED THROUGH 06/30/2010</p> <p>Including equipment costs</p> <p>Accounting and Appropriation Data:</p> <p>14.09.G8M8LAX.PPM.0089.040202003.20060000</p> <p>92020000.25130000.000000</p> <p>US\$ 25,000.00</p> <p>14.09.G8M5JR6.PCX.0089.040401012.200600009</p> <p>2020000.25130000.000000</p> <p>US\$ 41,374.77</p>	1	JB	66,374.77	66,374.77



Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05  
Period of Performance: All Periods (01 Jul 09 - 30 Jun 10)

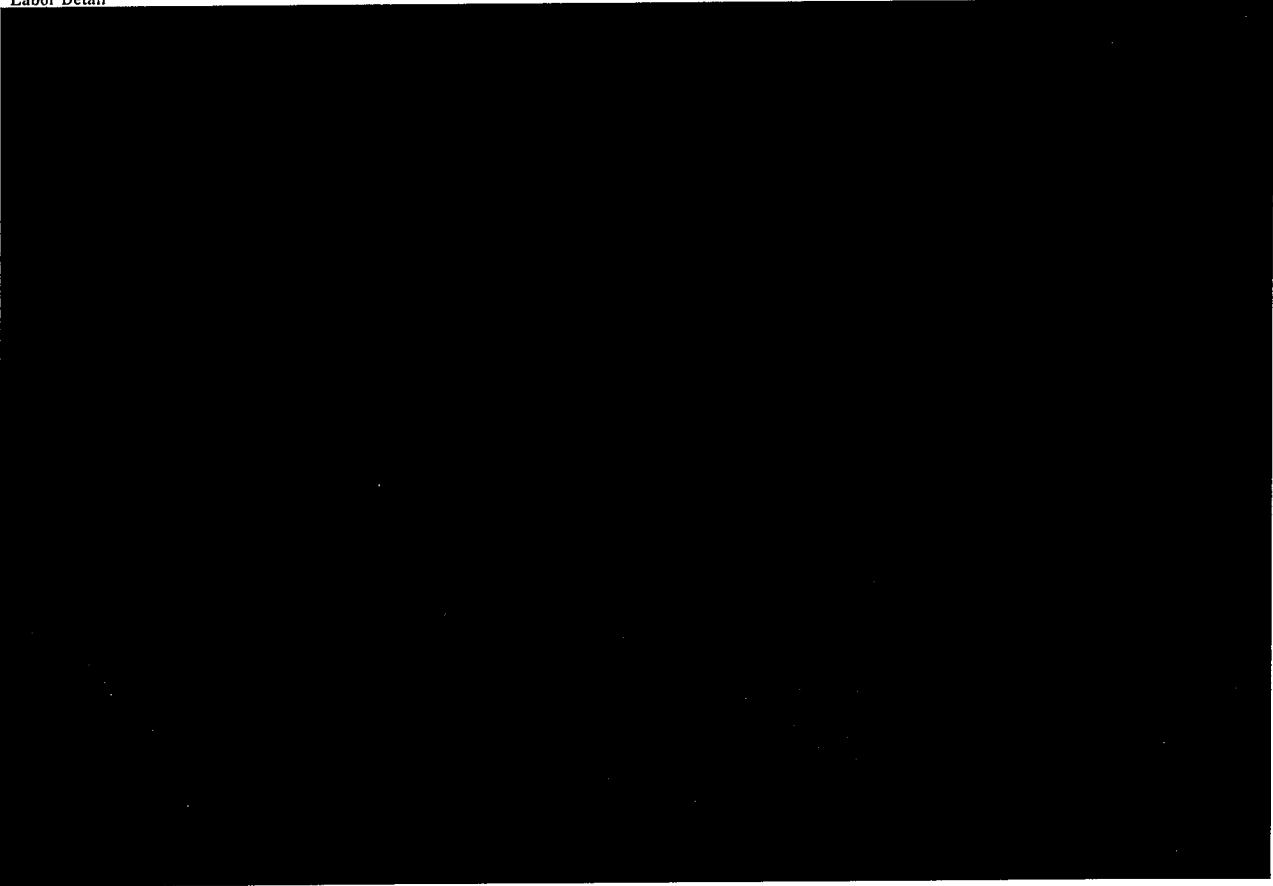
**SAIC PROPRIETARY**

SAIC's proposal, contained herein, includes information and data which are privileged, confidential, and/or proprietary to SAIC. This information and data is commercially sensitive and/or financial in nature, is not made available for public review, and is submitted to the government on a confidential basis only for evaluation in relation to this proposal and is exempt under the Freedom of Information Act. The information contained herein is protected, among other things, by the Trade Secrets Act, as codified, and any improper use, distribution, or reproduction is specifically prohibited. No license or right of any kind whatsoever is granted to any third party to use the information contained herein unless a written agreement exists between SAIC and the third party which desires access to the information. The information contained herein is submitted to the government for purposes of review and evaluation in connection with SAIC's proposal denoted herein. No other use of the information and data contained herein is permitted without the express written permission of SAIC. Under no condition should the information contained herein be provided in any manner whatsoever to any third party without first receiving the express written permission of SAIC.

Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05  
Period of Performance: All Periods (01 Jul 09 - 30 Jun 10)

FFP CLIN 7

Labor Detail



**SAIC PROPRIETARY**

ODCs-FFP-CLIN 7

Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05

*Offeror: Science Applications International Corporation - TSC (Co 6)*

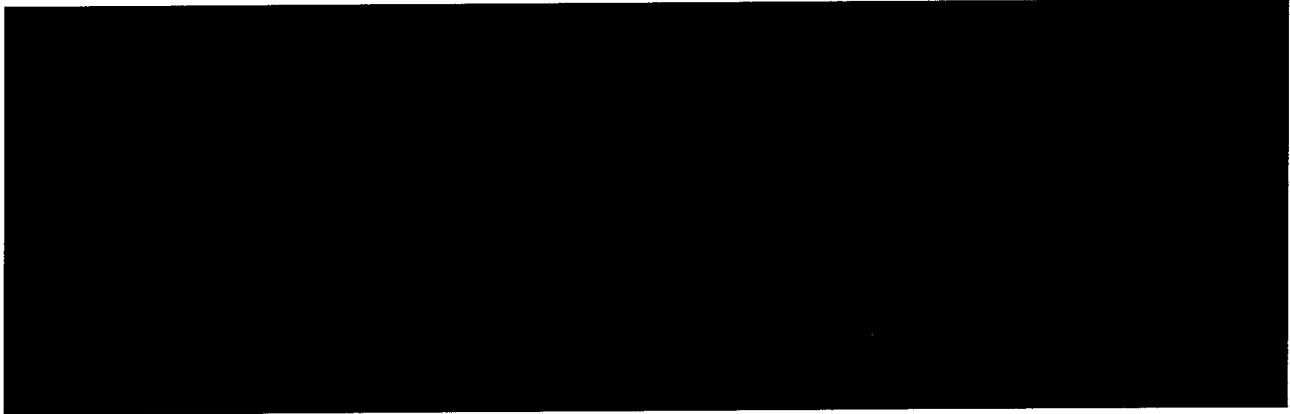
Proposal No.: TO-8 CY05\_FPR

Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05

Period of Performance: 01 Jul 09 - 30 Jun 10

**Other Direct Costs (ODCs)**

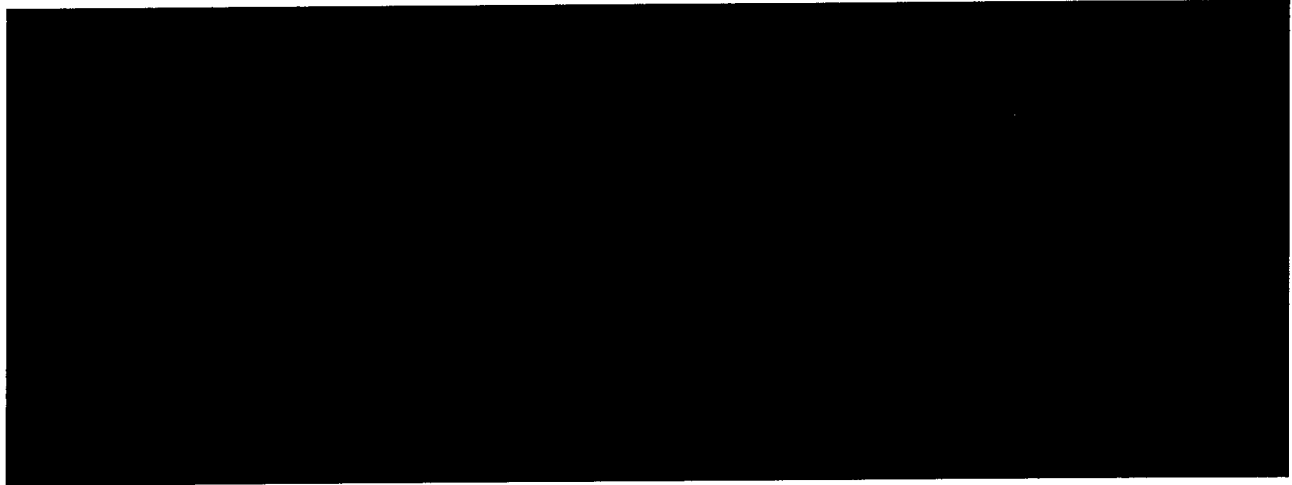
CLIN 7



Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPSS2 Contract Year 05 CLIN 7  
Period of Performance: All Periods (01 Jul 09 - 30 Jun 10)

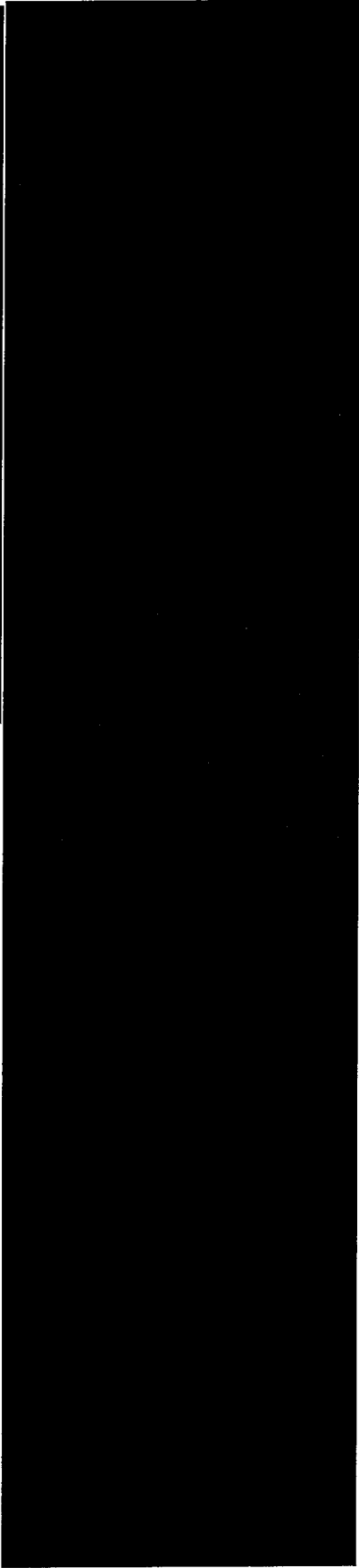
CPFF ODC's CLIN 7

Subtotal



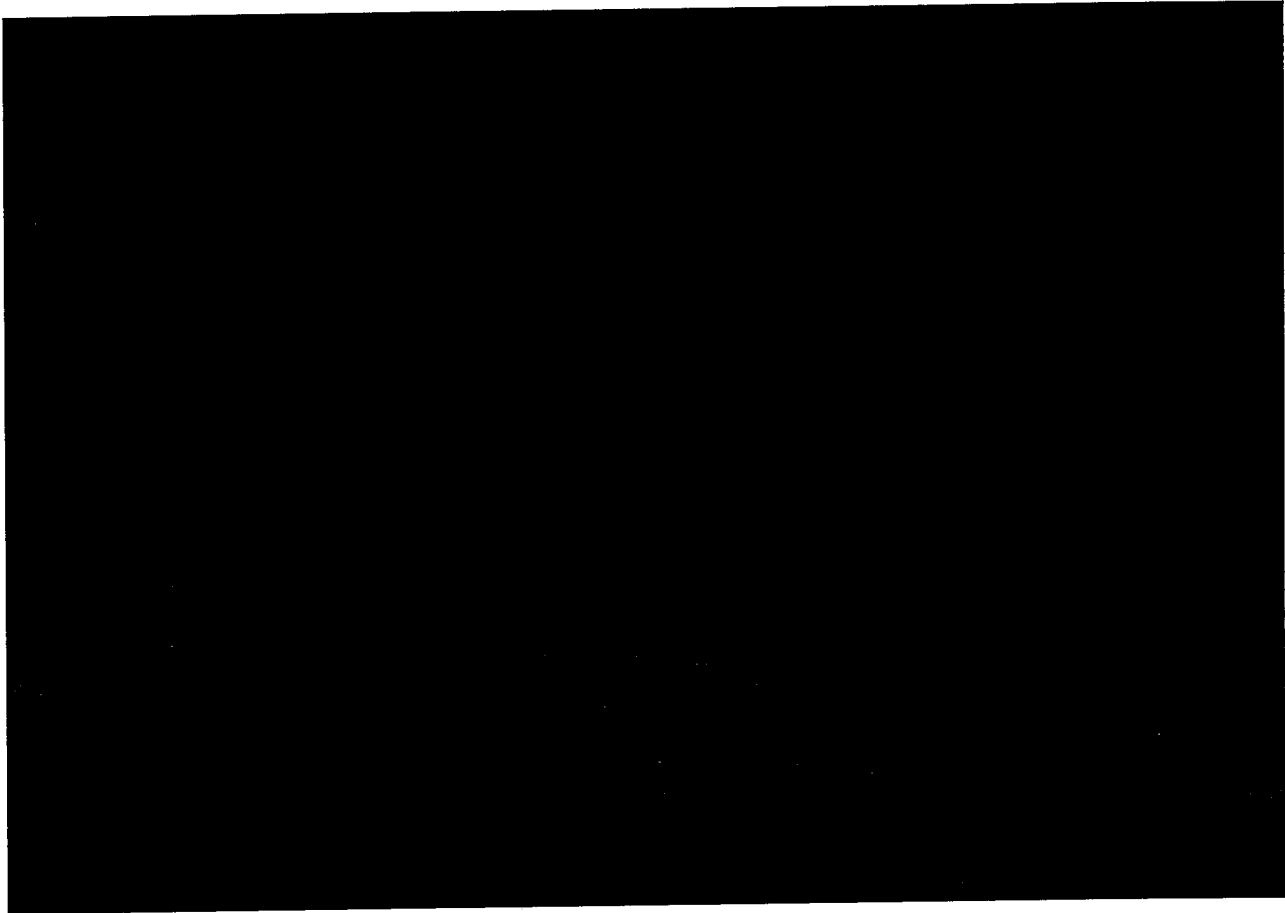
Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
*Officer Science Applications International Corporation - TSC (Co 6)*  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05 CLIN 7  
Period of Performance: 01 Jul 09 - 30 Jun 10

Travel Detail TRAVEL CLIN 7.1



Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05  
Period of Performance: All Periods (01 Jul 09 - 30 Jun 10)

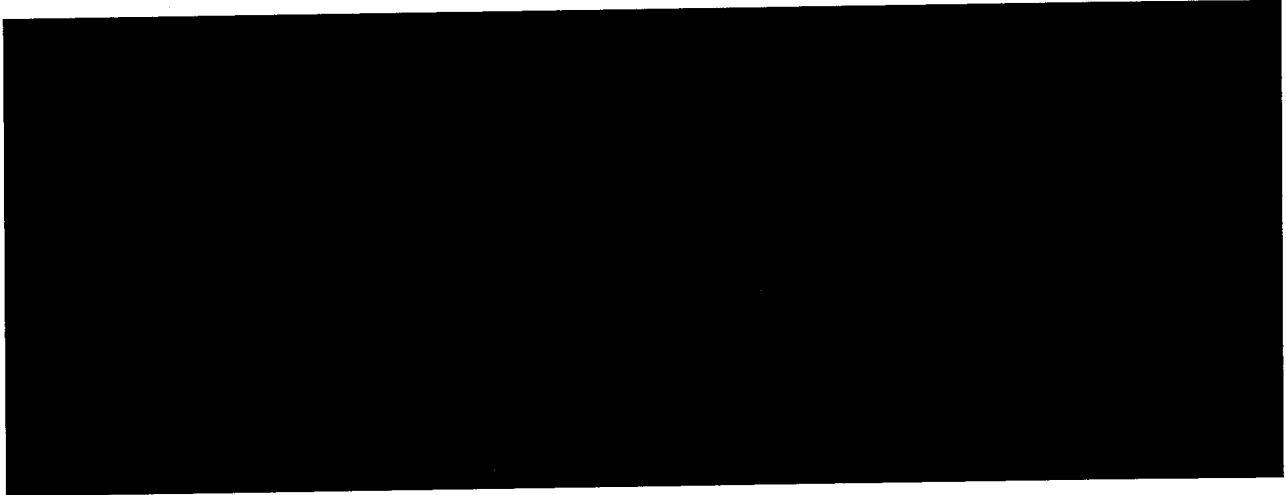
FFP CLIN 9



Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_FPR  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05 CLIN 9  
Period of Performance: All Periods (01 Jul 09 - 30 Jun 10)

CPFF

Subtotal



**SAIC PROPRIETARY**

ODCs-CPFF-CLIN 9

Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05

*Offeror: Science Applications International Corporation - TSC (Co 6)*

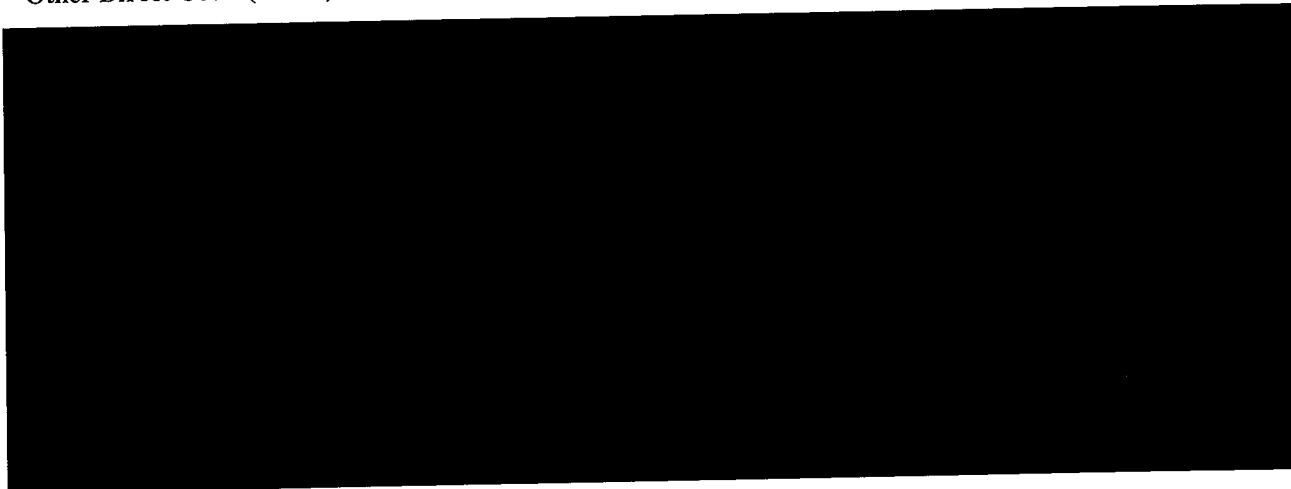
Proposal No.: TO-8 CY05\_FPR

Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPSS2 Contract Year 05

Period of Performance: 01 Jul 09 - 30 Jun 10

**Other Direct Costs (ODCs)**

CLIN 9 ODCs



Date Created: 7/14/09

**SAIC PROPRIETARY**

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"Use or disclosure of the data contained on this sheet is subject to the restriction on the title page of this proposal or quotation."



SAIC PROPRIETARY

Contract No.: QA1330-05-CQ-1035 / Task Order No.: Task Order 8 CY05  
Offeror: Science Applications International Corporation - TSC (Co 6)  
Proposal No.: TO-8 CY05\_44  
Proposal Title: Technical Support Service for Sterling Field Support Center - OPS22/OPS52 Contract Year 05 CLIN 9  
Period of Performance: 01 Jul 09 - 30 Jun 10

Travel Detail TRAVEL CLIN 9.1

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## Task Management Plan

<b>Title:</b>	<b>Technical Support Services for the Sterling Field Support Center</b>
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### THIS IS A CONTROLLED DOCUMENT

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**CONTROL NUMBER** \_\_\_\_\_

<b>ORIGINATOR:</b>	
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	Date Signed:
<b>PROGRAM MANAGER:</b>	
	Date Signed:

TMP cover sheet.


SAIC PROPRIETARY

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	Version Number:	1
	Issue Date:	7/1/09

## TASK MANAGEMENT PLAN


### CHANGE PAGE

Version No.	Purpose of Change	Pages Effected	Date of Issue	Instructions
1.0	Initial Issue (Note: This new TO-40 replaces TO-8 in its entirety)	All	7/1/09	Initial Document

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**PERIOD OF PERFORMANCE:** BASE PERIOD: JUL 1, 2009 – SEPT 30, 2009  
 OPTION 1: OCT 1, 2009 – DEC 31, 2009  
 OPTION 2: JAN 1, 2010 – MAR 31, 2010  
 OPTION 3: APR 1, 2010 – JUN 30, 2010

**TO TYPE:** Hybrid FFP and CPFF


## 1.0 Overview

The National Weather Service (NWS) Office of Operational Systems (OOS) is responsible for many fielded operational observation networks and observing systems. The Field Systems Operations Center (FSOC) is responsible for managing the Automated Surface Observing System (ASOS), the Cooperative Observer Program (COOP) Fischer Porter Rebuild kits, and the systems associated with the upper air program. The Observing Systems Branch (OSB) within FSOC is responsible for management of these programs from an operational perspective along with the Sterling Field Support Center. SAIC has many years of experience providing technical support services at the Sterling activity and over the past few years has worked with the government to shift the focus of the activity to field support work.

This work now includes supporting and testing of the surface and upper air weather observing systems, the associated sensors, control devices and accessories. As certain activities in the ASOS product improvement area have begun to spin down SAIC has and will continue to support the ASOS sustainment effort, and take a more active role in the area of field support. Thus with the commissioning of the RRS systems beginning in July, the SAIC will support the SFSC in developing a help desk function to support the Commissioned RRS systems and sites which have the Fisher and Porter Rebuild. This tasking will require some field work, observations, use and maintenance of calibration and testing equipment, and a variety of associated support work.

SAIC at the SFSC will also continue to support current and future activities of the other offices within the NWSHQ such as the Office of Science and Technology ASOS Product Improvement (ASOS PI). An example of this is the ASOS precipitation identifier testing and algorithm development.

Overall SAIC understands this work to include field support activities, testing of new surface, upper air and climatological equipment as well as ECP testing of changes to legacy systems. Additionally, this may include data continuity studies, which evaluate the impact a change has on an observing network. Tasking for these activities can come from any organization within the NWS; however, the principal customers are the Office of Operations Systems (OOS) which SFSC is

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a part of, the Office of Science and Technology, the Regional Headquarters, and all Weather Service Forecast Offices (WFO).

The Government TM or his designee is responsible for initial directing of tasks and setting priorities under this Task Order. Any changes in relation to price, schedule, or performance will only be authorized by the Contracting Officer. SAIC shall be responsive to all tasks assigned to it under this Task Order.


For this contract period the contract support is divided into two FFP CLINS. CLIN 1 will be FFP SFSC Operations and CLIN 2 ASOS PI. Each CLIN will have a sub CLIN for travel, training and ODC.

The tasks outlined in this document apply to the Sterling, and Johnstown facilities, and future sites selected by the Government to support future SFSC operations. The work at future sites will be accomplished to the extent of available manpower.

SAIC recognizes that the ASOS program is a high visibility program and is the nation's primary land based surface weather observing network. It is a joint DOC/DOD/DOT project with over 1000 observing systems. The ASOS Product Improvement Program is designed to improve maintainability, measurement quality and utility, and ensure the requirements for NWS & Aviation forecasts are met.

SAIC understands that the COOP FPR technical support includes the nationwide network of sensors that record weather information for use in the climate community. The sensors record a variety of meteorological measurements including temperature, dew point temperature, and precipitation accumulation. The COOP program currently uses a Fischer and Porter (FP) rain gauge for measuring precipitation accumulation every 15 minutes. The current sensor uses a paper tape punch mechanism that is obsolete and the information it records can be hard to collect. Therefore, the significant effort with this system is to replace the tape punch mechanism with a device that will have digital data recording and reporting capabilities. Support for other surface systems requested by the TM can be supported on a limited basis.

SAIC also recognizes the importance of the country's Upper Air Observing Program consisting of over 100 observing sites. Of these, 40 are MicroART, 3 are Sippican W9000 systems, the remaining sites are Radiosonde Replacement Systems (RRS), and 10 are CHUAS stations. All of these systems are supported by SFSC. These activities include the implementation of improved upper air observing equipment including the surface observing equipment (supports upper air operations), upper air tracking systems, radiosondes, and associated data acquisition and communication systems. SAIC will support the SFSC Alaska

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region in developing a plan to demonstrate the feasibility of using a hydrogen generator at select sites within the region, and prepare for conducting RRS data continuity test.

SAIC personnel have worked with the lead Technical Managers at the Office of Operations Systems (OOS) and Office of Science and Technology for many years and have a superior symbiotic relationship. We understand that tasking for this work can come from any organization within the NWS; however, the principal customers are the Office of Operations Systems and the Office of Science and Technology.

## 2.0 Scope


SAIC will provide technical support services for all tasks under this task order. We understand that the Government TM or his designee is responsible for the initial assignment all tasks and setting or changing priorities as long as price, schedule and/or performance are not affected. SAIC is responsible for coordinating task activities and for reporting the completion of all milestones in accordance with agreed to schedules. There will be one overall team lead for SAIC personnel at SFSC, but there are two technical leads, one for environmental science issues and one for engineering and IT work; both of these individuals need to be fully aware of tasking. SAIC will eliminate the Administrative Support position as directed by the government, with the understanding that this action will cause some increase in individual task time by all other personnel as they will need to perform the administrative work previously done by this individual. (Examples includes: Mail and FEDEX support, tracking of deliverables, travel plans and expense reports.)

To capture the day to day tasking SAIC will use the existing work request form. If SAIC has a question or concern about a particular work request we will bring it to the attention of the requestor and/or TM for discussion and resolution. Once a work request is completed, the requester and TM will be notified. Prior to a due date if it becomes apparent the due can not be met, SAIC will notify the requester and TM.

As part of the tasking, SAIC will provide algorithm development support, perform equipment maintenance on test infrastructure, perform test bed upgrades, and provide meteorological observations (surface, climate, and upper air) during significant weather events and as scheduled to meet test requirements.

We understand the Sterling Field Support Center activities also include operational support for NWS observing systems, including the deployment and initial issue of new equipment, software/firmware, and modifications. Because the exact schedules and milestone cannot be pre-determined in most cases,




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SAIC will prepare approximate task plans, staff work assignments, projected schedules (MS Project) that provide best estimate for completion for each work assignment and deliver these to the government TM for approval on a weekly basis. Status reports documenting work in-progress or completed will be provided each week to the TM along with updated MS project schedules. Reports will be delineated by task and by individual and include a list of all action items as well as a list of work order created during the last week. The report will cover CLIN 1 and 2. We understand that the Government reserves the right to request re-assignment of our staff if new or higher priorities exist as long as price, schedule and/or performance are not affected. However, we believe it is highly unlikely changes such as these could be affected without modifying one of the three factors.

SAIC Site Lead shall conscientiously work to insure the staff supporting the SFSC is multi-disciplined in terms of being able to work across system types, diverse technologies, and applications. In accordance with SAIC corporate policy, each of our staff will be afforded the opportunity to work a 9 day 80 hour two week work period. SAIC will insure that an agreed upon minimal manning will always be available on workdays during "core" hours (50 percent of work force). Upon implementation of the help desk (understood to be December 2009), SAIC will arrange for individual to work shifts so as to cover the hours between 6:00AM and 10:00PM. We understand that in most circumstances, anyone assigned a help desk shift would be expected to perform their daily duties. During significant weather events SAIC understands that assigned personnel may be required to work extended hours required, including weekends. Any additional tasking/priorities that require staffing beyond the proposed staffing level and/or other events such as adverse weather beyond the amounts estimated in this proposal, shall give rise to a proposal for an equitable adjustment to the Task Order.

In execution of this task order, miscellaneous support is necessary. This support includes, but is not limited to, coordinating activities with the Government TM as appropriate, the development of test plans, test procedures and Standard Operating Procedures (SOP) for the maintenance and operation of equipment and observing practices, presentations, technical reviews, Environmental Compliance, Health and Safety; Training; Administration; Logistics; and Technical Training.

As in past years the scope of the work at Sterling continues to evolve to support requirements to the NWS mission and the Office of Operations Systems (OOS) and the Office of Science and Technology. Accordingly this Task Management Plan (TMP) outlines our overall project management structure and describes each of the SOW tasks under which we may be tasked to provide support to the NWS. We have also provided a Firm Fixed Price to accomplish what is our

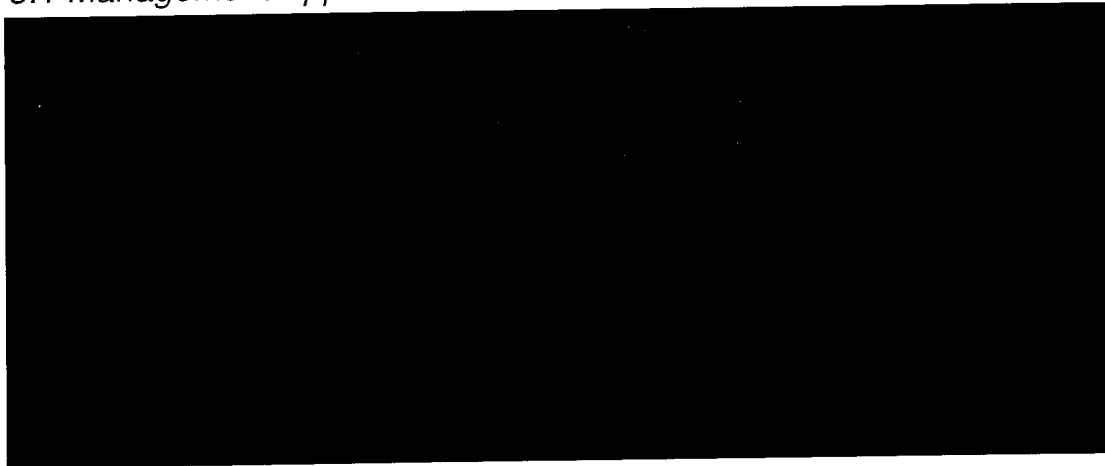
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current best estimate of the actual tasking that will be undertaken during the 1 July 2009 to 30 June 2010 timeframe. In many cases the individual tasks are broadly defined.

In order to complete this work, yet keep within the government's funding limitations, SAIC has placed limits on several of the tasks. As these tasks are more accurately defined, prioritized and planned, SAIC will evaluate our ability to execute Contract Year 05 mission requirements and will diligently work with the Government Technical Monitor (TM) to support tasking priorities of the NWS within our staffing capabilities. Additionally, many items accomplished as part of each task and classified as maintenance will be accomplished only as man hours are available. The SAIC Site Lead shall supervise all personnel performing the technical support. SAIC is responsible for coordinating task activities and for reporting the completion of all milestones in accordance with agreed to schedules.

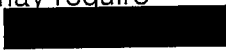
### 3.0 Statement of Work


#### 3.1 Management Approach

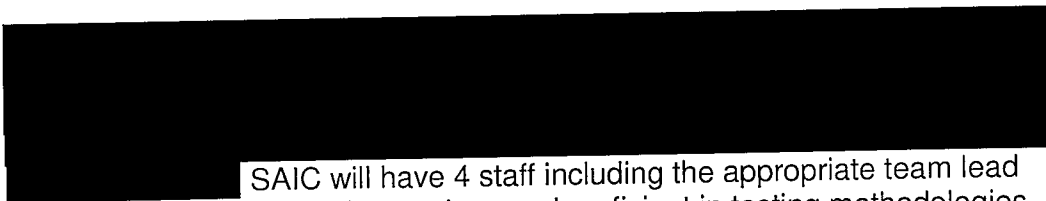


#### 3.2 CLIN 1, Surface Testing & Field Support - Office of Operational Systems

##### **Task 1.1 General ASOS Test & Field Support**

SAIC will provide support for general ASOS tests not covered under Product Improvement or System Tests, e.g., test of a replacement component. Support will also be provided to field and HQ units contacting the center with questions requiring a response. We understand this activity may require travel to remote site to support the field or testing of systems. 

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SAIC will have 4 staff including the appropriate team lead certified to take surface observations and proficient in testing methodologies. Certification of personnel will be in accordance with NWS policy and procedure. SAIC staff designated to take surface observations will be certified within 90 days of employment or 90 days from July 1 for current employees. SAIC will designate a person and have a process in place to quality control surface observations. Weather observations will be made on an as-needed basis during weather events that are expected to produce weather data that will help meet the goals of the testing programs. We understand that there will be limited surface observations taken to support Clin 1.

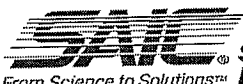
#### **Task 1.1.1 ASOS Sustainment**



In CY05 SAIC will begin developing test plans and procedures for the evaluation of replacement ASOS sensors. In addition, SAIC will also support the ASOS Sustainment Team developing the replacement ACU/DCP. the technical discussions, SFSC's efforts will be limited to work with the sensors, and will be limited to some preliminary plans. Work on this task is completely different from that of last year; the special effort on new ACU-DCP specifications will not be required this year. Required reports are listed in deliverables.

#### **Task 1.1.2 ASOS System Testing/ASENSE**

SAIC will support ASOS System tests including the use of the ASENSE sensor simulator at Sterling. EI-Techs and scientist will be assigned to provide technical support, on an as-needed basis, to set up and perform ASOS system testing for new ASOS firmware loads before they are fielded at operational ASOS sites. This work will require scientist to perform test procedures for testing firmware changes, sensor upgrades, and software fixes when new firmware versions are released. It is anticipated that this testing will require approximately one week for minor software builds and 3 weeks for major software builds. The NWS is expecting 2 major builds and 3 minor builds. SAIC will conduct ASOS ST using the three test ASOS systems at Sterling and the ASENSE sensor simulator. This support also includes running and updating test procedures and test datasets to test the mathematical bounds of the ASOS algorithms being tested. This is a limited effort similar to last year. Specific algorithm development is covered under

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Clin 2. Test Track will be used to document deficiencies. Required reports are listed in deliverables.

### **Task 1.1.3 Reports**

For all Surface Systems all SAIC personnel will provide input to weekly activity reports in paragraph form, through the assigned Lead. Weekly report shall also include weekly work acceptance form.

## **1.2 Upper Air Testing & Field Support**

### **Task 1.2.1 General Upper Air Test & Field Support**


SAIC will develop the plan to conduct and actually take as many as 450 radiosonde test flights, which can encompass nighttime as well as weekend operations. This includes multi-radiosonde releases. Test flights may be required at various sites away from Sterling requiring travel as requested by TM. SAIC will generate the procedures for certifying SAIC staff with use of the new hydrogen generator in accordance with NWS safety protocols. SAIC will test balloons in support of the NWS Balloon tests and support CHUAS test flights. At least 4 SAIC staff will be certified in upper air and proficient in testing methodologies. Certification of personnel is to be in accordance with NWS policy and procedure. Personnel designated to take Upper Air Observations will be required to be certified within 90 days of employment or 90 days from July 1 for current employees. SAIC will designate a person and develop a process to quality control Upper Air Observations. Required reports are listed in deliverables.

### **Task 1.2.2 Conducting RRS System Tests**

SAIC will support and conduct System Tests for Build 2.0 software and up 3 sub-builds. This will require executing government-developed test procedures and providing Test Track deficiency reports as problems are found. Required reports are listed in deliverables.

### **Task 1.2.3 RRS QPL Test Support**

SAIC will conduct testing of radiosondes from multiple vendors in order to place them on the Qualified Products List for the National Weather Service. In-depth testing will occur at the Sterling site which will include flights (day and night) and use of multiple environmental chambers. The government will coordinate flight test activities on ATM and snow-white capabilities. Testing will also involve traveling to different climatic regions in order to test the radiosonde in a wide variety of conditions which are seen operationally. Test teams consisting of one to two SAIC personnel are expected to travel to at least four sites. This effort is expected to extend past the end of this contract

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year. Technical discussions indicated there would be a maximum of three vendors and only one remote site visit would be occurring at any given time. Duration on site is expected to be 25 days. At least two SAIC staff will be able to demonstrate ATM activities proficiency to the Upper Air Manager within 90 days of employment or 90 days from July 1 for current employees. Required reports are listed in deliverables.

#### ***Task 1.2.4 Upper Air Analysis Tools***

SAIC's software engineers will upgrade software data analysis tools and procedures to automate the data collection and analysis. Personnel will be experienced with MYSQL. Technical discussions indicate this is mostly an effort to re-host the software using MYSQL from the ACCESS database. Required reports are listed in deliverables.

#### ***Task 1.2.5 Reports***

For all Upper Air projects, SAIC personnel will provide input to weekly activity reports in paragraph form, through the assigned Lead. Weekly report shall also include weekly work acceptance form. All formal reports will be reviewed by the appropriate team leader.

### ***1.3 COOP Testing and Field Support***

#### ***Task 1.3.1 COOP QPL Test Support***

SAIC will continue QPL qualification testing to compare the performance of rebuilt Fischer and Porter gauges (gauges that have been modified with installation of FPR kits) against the specification. An ASOS model OTT AWPAG located inside a DFIR will also be used as a comparison sensor for the outdoor performance testing. SAIC will receive COTS Fisher Porter rebuild systems and evaluate their performance along with government personnel. SAIC will also monitor performance of up to four systems at Sterling and up to three remote sites. The data will be analyzed using spreadsheets that contain metrics. Required reports are listed in deliverables.

#### ***Task 1.3.2 Temperature Sensor Testing***

SAIC will develop a test plan and procedures for the evaluation of temperature sensors which can be used in the COOP network. Testing is expected to begin in October. The procurement and testing of the sensors is expected to follow a QPL process and based on technical discussions will be accomplished this year. Required reports are listed in deliverables.

#### ***Task 1.3.3 Evaluation of Cotton Region Shelters***

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## **1.4 SFSC Infrastructure Support**

### **Task 1.4.1 Surface Systems Maintenance and Upgrade Support**

SAIC will perform maintenance and upgrades on legacy ASOS equipment and test beds at the Sterling Facility. Maintenance actions are limited in time and amount to a quantity similar to previous years.

### **Task 1.4.2 Upper Air Site Maintenance**

will perform test site maintenance on the existing Upper Air systems, test equipment, test chambers, and support equipment at Sterling VA as required to maintain high quality test performance. Maintenance actions are limited in time and amount to a quantity similar to previous years.

will develop maintenance requirements for a hydrogen generator including safety requirements to be used in new balloon inflation building.

### **Task 1.4.3 Standard Operating Procedures**


SAIC will develop Standard Operating Procedures (SOPs) for operating and maintaining test assets, including the Sterling test chambers. SAIC will also prepare SOPs for conducting standardized and specialized tests. SAIC is authorized to have some SOP's contain NWS proprietary information, which will be identified as proprietary. SOPs will be created on an as needed basis to maintain proficiency. Before developing an SOP, it will be approved by the TM.

### **Task 1.4.4 Test Hardware Maintenance**

will ensure test systems in use are maintained and operational for tests.

### **Task 1.4.5 Test Chamber Evaluation**

SAIC will conduct operational evaluations of existing chambers and develop a maintenance schedule for chambers and other test assets. Additionally SAIC will have at least two staff members proficient in the use of the wind tunnel and RH laboratory measurements. Per technical discussions, SAIC will submit a report on the evaluations and recommended remediation.

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#### **Task 1.4.6 Property Management**

SAIC will continue with providing property management support, shipping and receiving support and implement plan for tracking and verifying receipt of shipments of new equipment deployed to the field.

#### **Task 1.4.7 Computer/Network Maintenance**

[REDACTED] will provide minor computer/network maintenance at the Sterling Facilities. This includes minor hardware replacement, account setup, installation of office application programs, and routine security updates within our current capabilities. SAIC will not be responsible for more complex network security tasks which would require specialized training.

#### **Task 1.4.8 Installation, Operations, and Maintenance Document Reviews**

SAIC will assist in the development and review of documents associated with installation, operation, and maintenance of equipment. SAIC will assist in the development and review of documents associated with operations of existing/new equipment and the taking of observations.

#### **Task 1.4.9 General Infrastructure Support**

SAIC will assist in developing a professional work environment; including the organization and cleaning of all SFSC test assets, the replacement/surplus of old and obsolete equipment and implement a clean-as-you-go concept. [REDACTED]

[REDACTED]


#### **Task 1.4.10 Software/Database Support**

SAIC software engineers will continue to work on three programming efforts in order of priority:

- Develop a database with user interface for queries to support the Radiosonde QPL process
- Finish the relational database that will store all sensor (surface climate and upper air) and related data in our database (This database will support/automate data acquisition, data analysis and report writing.)
- Other minor programming efforts will be accomplished on a not to interfere basis.

#### **Task 1.4.11 Customer Relations Support**

The SAIC SFSC Lead will assist the Government Technical Monitor in implementing the concept of the "Sterling Field Support Center" by

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fostering a symbiotic relationship with field sites and regional headquarters. This will allow for an exchange of information and ideas. This task will also include site visitations/inspections by Sterling personnel and the hosting of field/regional personnel at Sterling to support operations. This effort shall also include developing a mind-set that is cooperative, caring, courteous (including proper phone etiquette) and truly concerned for the customer's problems. [REDACTED]

#### **Task 1.4.12 Technical Support Desk**

SAIC will assist in the developing and establishing of the SFSC help desk. SAIC will assist field sites and headquarters personnel in the timely analysis of equipment and procedural problems. SAIC will assist in implementing solutions to problems. This requires SAIC personnel to provide professional and technically correct correspondence (verbal or in writing) to all customers; for technicians to seek out the most knowledgeable staff member, and to follow up on the proposed solutions. At times, this may require travel to a site to assist in the problem solving process or to implement a solution/problem work-around. SAIC will provide emergency response to operational problems. (During Technical discussions it was determined that in this case emergency response means prepared to fly to the site within a days notice.) This effort will initially be a part time effort anticipated to be one or two phone calls a day and one assist visit per quarter. SAIC will provide field support in responding to questions from the field and diagnosing problems which might arise. [REDACTED]

SAIC will assist in the implementation of a web based support desk. The required help desk management software will be provided by the Government.

### **3.3 CLIN 1A – SFSC Operations Travel & ODCs**


#### **Cost Plus Fixed Fee -Office of Operational Systems**

Period of Performance: July 1, 2009 to June 30, 2010

#### **Task 2.0 Travel, Training, and Software Buys**

Accomplishment of the work required by this task order requires travel for weather observations, field site installations and maintenance. SAIC will coordinate and obtain the required government approvals for travel and



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training activities. SAIC will continue to provide program support that includes coordinating travel and training at a level similar to previous years. Travel, training, and software procurements will be billed as other direct cost (ODC). SAIC has included training costs for those classes not provided by the government.

### ***3.4 CLIN 2. Technical Support for Automated Surface Systems (ASOS Product Improvement (PI). Office of Science and Technology***

Period of Performance: July 1, 2009 to June 30, 2010

### **3.0 ASOS PI Support**


#### ***Task 3.1, Ceilometer Sub-Visible Ice Crystal Study***

SAIC scientists shall continue the study of the performance of the replacement ceilometer as it pertains to falsely detecting and reporting sub visible ice crystal layer formations will continue. We will install a second ceilometer at the forecast office in Bismarck, ND, and a third ceilometer will be installed at the forecast office in Aberdeen, ND. We understand that at Aberdeen, a DAS will be installed and at Bismarck the existing DAS will be used. The effort involved will include monitoring the climatology for conditions conducive to sub visible ice crystal layers and correlating these events to the ceilometer reports. The forecast office staff will contact SAIC to report conditions favorable to sub visible ice crystal layer formations. Required reports are listed in deliverables.

#### ***Task 3.2 AWPAG Transfer Function Development***

SAIC personnel will work on the AWPAG transfer function development activity to compare the catch in the standard ASOS AWPAG configuration (with Auxiliary 8 foot diameter Alter windscreen) to the catch of an AWPAG inside a Double Fence Intercomparison Reference (DFIR). Through our past work on this project we understand the DFIR is designed to maximize catch and the ratio of the catch in the AWPAG with ASOS shield configuration to the DFIR catch is the transfer function. The ratio depends primarily on wind speed and secondarily on temperature, so developing an equation relating the AWPAG/ DFIR ratio to wind speed and temperature requires long term field testing in a wide variety of conditions of wind and temperature.

We have collected data to support development of the transfer algorithm at Sterling and the NWS test facility at Johnstown during contract year 04 (2008-2009). During contract year 05 (2009-2010) we will collect data from AWPAGs located at NCAR, Johnstown, and Sterling. NCAR currently has one AWPAG installed within a DFIR. The effort will be to install a second AWPAG with Auxiliary Alter screen at the NCAR site, and

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to collect the data from NCAR Data Acquisition Systems and develop the final transfer function algorithm structured English. Effort will include:

- AWPAG with new 8 foot diameter Alter shield installed at NCAR
- Collection of data from all three test sites
- Analysis of data, formulation of initial transfer algorithm, generate final report, provide briefing of results.

Required reports are listed in deliverables.

### **Task 3.3 EPI activities**

SAIC understands EPI activities will be primarily directed at evaluation of COTS sensor performance, and developing hail detection reference capabilities. NASA has developed a hail detector which we will duplicate in-house or through a build-to-specification contract. It is anticipated that there will be a field test of EPI COTS/prototype sensors in mid-summer of 2010. Analyst/ clinical observer support will be required for observing in support of the field test.

- Modify DAS computer software to accommodate communication with COTS sensors
- Install COTS EPI sensors (estimated 4 sensors from 3 vendors at 2 locations)
- Conduct lab hail simulation tests to validate use of NASA hail detectors
- Conduct field test of hail detector to determine if performance in hail and heavy rain
- Evaluate available information, including the CoCoRAHS program for suitable venues for field testing in conjunction with NASA hail detector
- Update Test Plan for field test of COTS EPI sensors
- Conduct observations at Sterling and Johnstown to establish performance of COTS sensors
- Collect and evaluate data from remote sites where hail standard is installed
- Generate Interim and Final reports on COTS EPI performance


Required reports are listed in deliverables.

### **Task 3.4 Maintenance of Johnstown Testbed**

SAIC will provided limited support to the National Weather Service's remote winter test site at the Johnstown, Cambria airport. We will maintain the test bed and observation trailer during the contract period;

[REDACTED]

[REDACTED] We will perform periodic and impromptu maintenance and upgrades on current and future test equipment, to include computer support. Travel will be required and charged under CLIN 2A

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### **Task 3.5 Retrieval of Ceilometers and equipment from Mount Washington Observatory, NH**

SAIC understands that the testing of replacement ceilometers at Mount Washington has concluded. We will travel to MT Washington upon agreement on the proper time and remove the two CL31 ceilometers, mounts and miscellaneous equipment. We will pack the equipment for return to Sterling, VA.

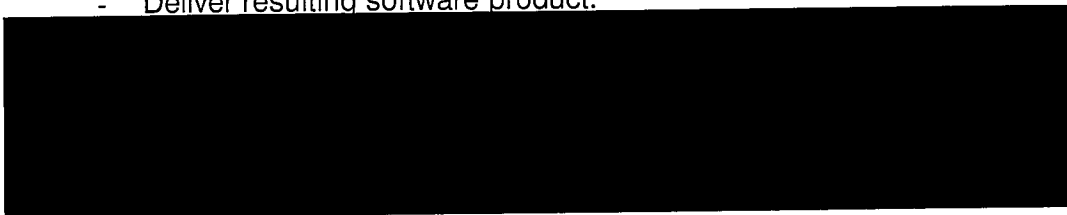
### **Task 3.6 Retrieval of Ceilometers and equipment from Fairbank, Alaska**

SAIC understands that the testing of replacement ceilometers at Fairbanks has concluded. We will travel to Fairbanks upon agreement on the proper time and remove the two CL31 ceilometers, mounts and miscellaneous equipment from the test venue. We will pack the equipment for return to Sterling. To meet the delivery requirements for the ice crystal test installations, the Fairbanks retrieval shall be planned for late July 2009.

### **Task 3.7 LIDAR Klett Algorithm Activities**

In the 2009 contract year the NWS and SAIC jointly developed very preliminary analysis software to be used in conjunction with the LIDAR raw output data to post-process cloud height information. This effort involved using high resolution data from the Sigma Space LIDAR in conjunction with a Klett algorithm derive optical extinction coefficients which were then used to report cloud data. In Contract Year 05 SAIC will complete the development and implementation of the Klett algorithm to support evaluation of the ASOS replacement ceilometer during compliance testing of the algorithm which will extend the ceilometer reporting range from 12,000 ft to 25,000 ft. Activities will be primarily software engineering efforts directed at completion of the Klett implementation and demonstration that it is effective. Travel is not anticipated for this effort. This effort includes:

- Modify existing Klett post processing algorithm to post process Sigma Space LIDAR raw output data.
- In conjunction with NWS, test the resulting Klett post processing algorithm.
- Deliver resulting software product.



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### 3.5 CLIN 2A- ASOS PI Travel & ODCs Cost Plus Fixed Fee

**Period of Performance: July 1, 2009 to June 30, 2010**

#### ***Task 4.0 Travel, Training, and Materials***

Accomplishment of the work required by this task order requires travel for weather observations, field site installations and maintenance. SAIC will continue to provide program support that includes coordinating travel and training at a level similar to previous years. Travel, training, and material/supply procurements will be billed as other direct cost (ODC). SAIC has included training costs for those classes not provided by the government.

### **4.0 Supporting Documents and References**

None

### **5.0 Implementation Plan**

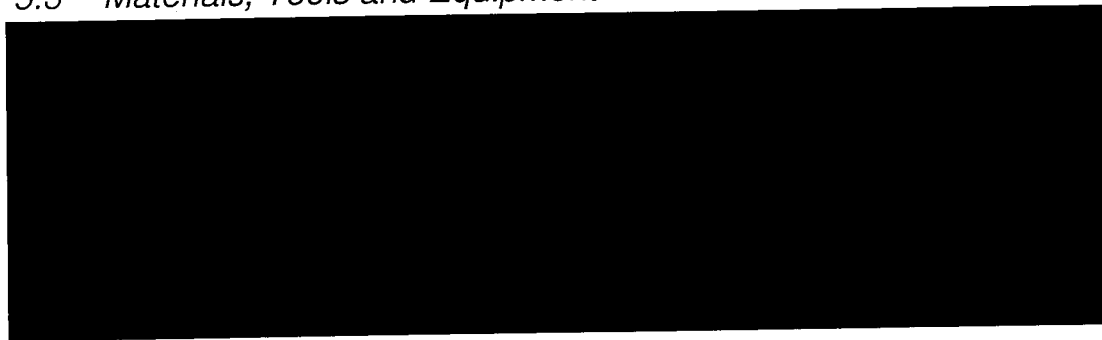
#### ***5.1 Work Breakdown Structure***

N/A

#### ***5.2 Performance Specification and Metrics***

SAIC will deliver a Quality Assurance Plan (QAP) within fifteen (15) business days after award of this Task Order, which will allow NDBC to develop a Quality Assurance Surveillance Plan (QASP), which will be mutually agreed upon by the parties. The mutually accepted QASP will be incorporated into this task order.

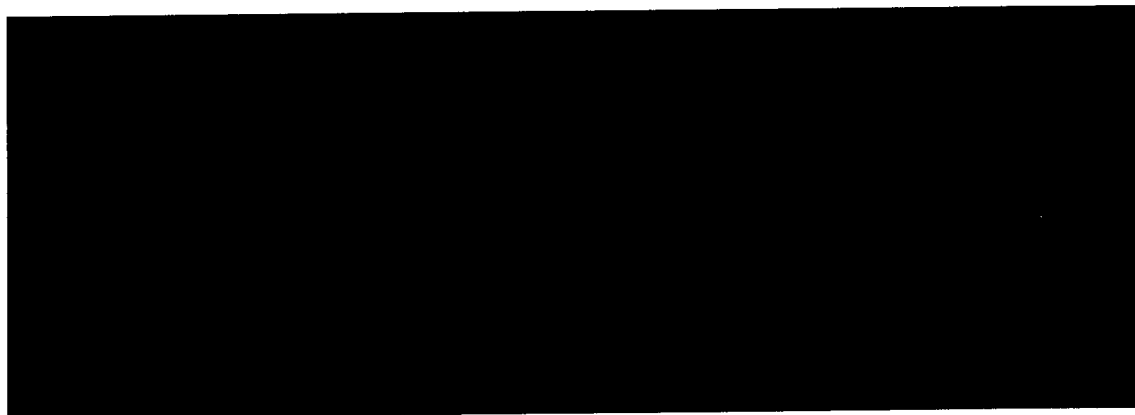
#### ***5.3 Materials, Tools and Equipment***




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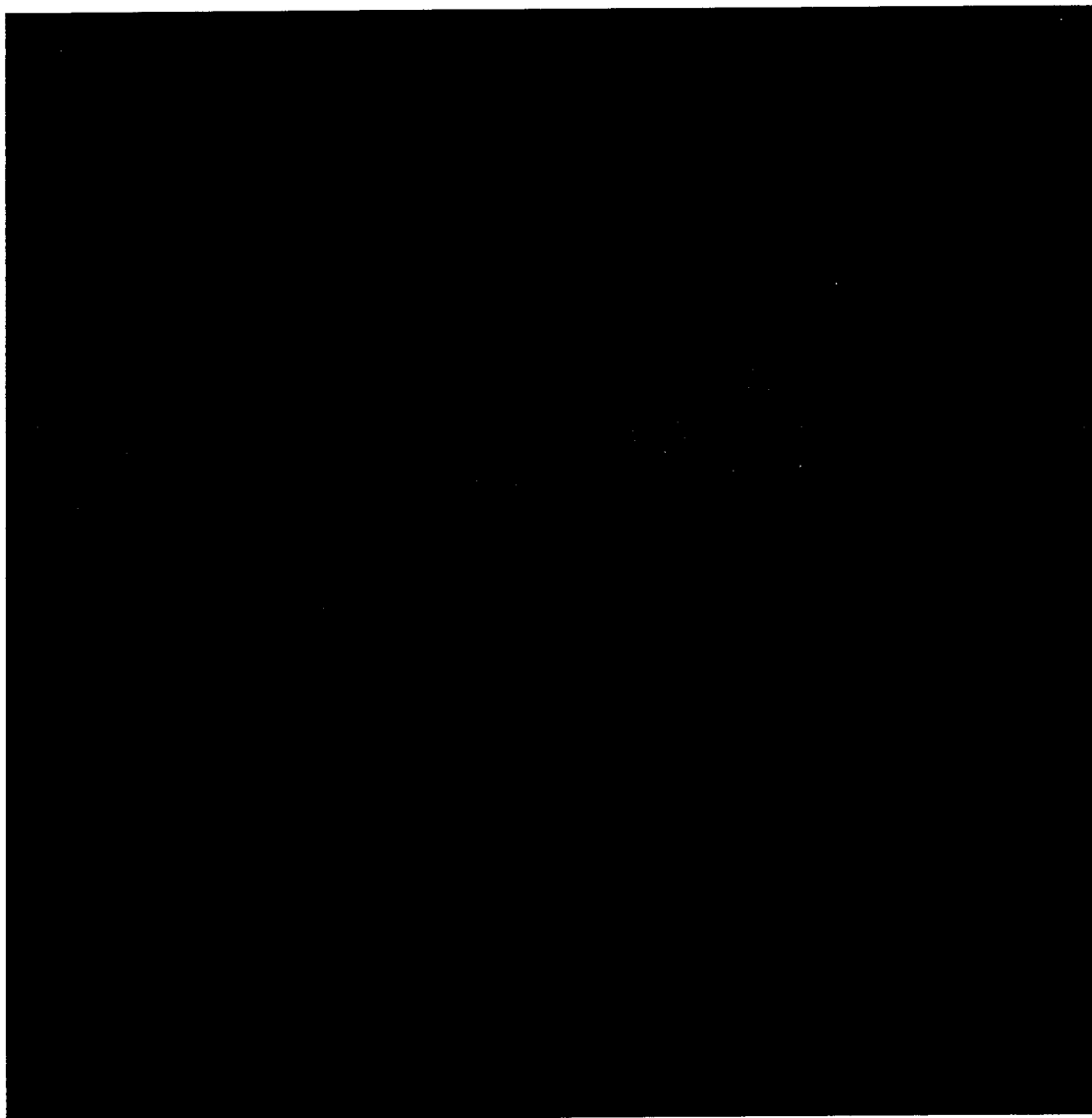
#### 5.4 Assumptions and/or Deviations




3. General computer/network maintenance will be required at the Sterling and Johnstown Test Facilities. Costs for such support shall be included in the cost proposal under CLIN 1, FFP for Sterling and CLIN 2, FFP for Johnstown. SAIC assumes that the National Weather Service will be responsible for IT security and the update of systems and servers to meet NWS requirements.
4. Travel for weather observations is based on past years experience in this area considered a not to exceed estimate.
5. For the purpose of estimating this Task Order, SAIC assumes that maximum number of radiosonde test flights is 450 during the contract period.
6. SAIC acknowledges that the Government requires that at least one employee be qualified on RRS maintenance and one be qualified on MicoArt maintenance. These persons may achieve their qualification during the period of performance. Additionally we will have at least four personnel certified to take Upper Air observations and at least four including the appropriate team lead be certified to take surface observations as specified in the individual tasks.

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7. Initial training of contractor employees will be accomplished in accordance with the terms and conditions of the task order and will be reimbursed under the ODC CLINs. However, if a vacancy occurs during the performance period of this task order and training is required for the vacated position, or refresher training is necessary, unless refresher training is related to government changes to existing test equipment or systems, the contractor shall be responsible for the cost of the required training and associated travel of the employee and it shall not be charged to the ODC CLINs of this task order.

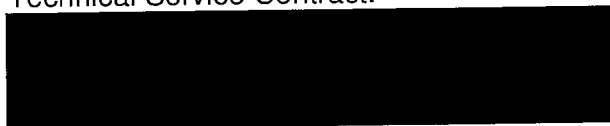


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9. Environmental Compliance, Health and Safety requirements will be observed at the Sterling and Johnstown Test Facilities. Training on these issues for Sterling personnel is to be included in the TO cost proposal under CLIN 1A, CPFF for Sterling issues, and CLIN 2A CPFF for Johnstown issues.



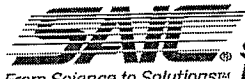
11. SAIC personnel will follow DOC and NOAA IT Security Policy and the IT Security policy and procedures in the NWS Directives System. SAIC personnel will complete IT Security training and sign the NOAA Rules of Behavior for NOAA Information Systems. This will include policies specific the SFSC complex.
12. SAIC engineers will require government and manufacturers input for the development of safety procedures and standard operating procedures for the Hydrogen generating system.
13. In order to complete this work, yet keep within the government's funding limitations, SAIC has placed limits on several of the tasks. As these tasks are more accurately defined, prioritized and planned, SAIC will evaluate our ability to execute Contract Year 05 mission requirements and will diligently work with the Government Technical Monitor (TM) to support tasking priorities of the NWS within our staffing capabilities.
14. SAIC acknowledges the Government's identification of the following positions as key personnel in this task order and accepts the government's right to approve personnel selected to fill these positions upon vacancy. Further, these positions will be filled as referenced in section H14 of the basic NDBC Technical Service Contract.



## 6.0 Milestones and Deliverables

### 6.1 Program Performance Schedule

A detailed performance schedule is to be delivered to the Government within 60 days after the award of the contract. The performance schedule is to be

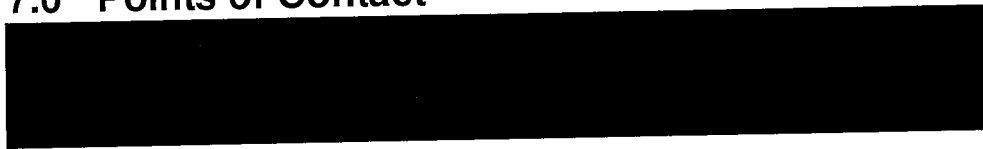
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delineated and updated based on the weekly status meeting with the Government.

## 6.2 Deliverables

See Appendix C for the Deliverables/Submittals Table.

## 7.0 Points of Contact



## 8.0 Cost Proposal

See the attached cost proposal. SAIC's cost proposal is based on the following:

1. SAIC has proposed labor costs in accordance with the subject contract Section B.6 Rate Schedule for Contract Year 5.
2. All assumptions included within this TMP.
3. All travel will be in accordance with the Federal Travel Regulations.
4. The period of performance is beginning from July 1, 2009 through June 30, 2010 for CLIN 1, CLIN 1A, CLIN 2, and CLIN 2A.

### 8.1 Terms and Conditions

Terms and conditions governing this Task Order will be those currently in effect for Contract No. QA1330-05-CQ-1035.

### 8.2 Contract Type


SAIC has proposed a Firm Fixed Price (FFP) for CLIN 1 and CLIN 2 labor and Cost Plus Fixed Fee (CPFF) for CLIN 1A and CLIN 2A for Other Direct Costs, to include travel, training, and conference fees.

## 9.0 Payment Terms

For the Firm Fixed Price elements of this task order, payments will consist of 12 equal payments over a one year period of performance. Periods of less than one year shall be prorated in accordance with the period of performance and the SAIC accounting periods covered. Payment shall be made within 30 days.

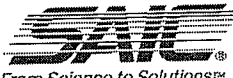
For the Cost Plus Fixed Fee elements of this task order, invoices shall be submitted upon completion of each SAIC accounting period. Payment shall be made within 30 days.



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## APPENDIX A – WORK BREAKDOWN STRUCTURE

Not applicable

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## APPENDIX B - SCHEDULE


Not applicable

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## APPENDIX C – DELIVERABLES

**Note:** Appendix C includes only specified, defined deliverables, however, SAIC will complete all tasking as defined in the Task Management Plan (TMP). Items from both the TOS for CLIN 1 and CLIN 2 that were not included in Appendix C are acknowledged and listed as independent tasking in the TMP.

TASK	Deliverable/Submittals	Due Date	Acceptance Criteria
<b>CLIN 1</b>			
1.1 General ASOS Test & Field Support	At least four SAIC personnel certified in taking surface observations	Certified within 90 days of a new hire or 90 days from July 1	Employees pass NWS qualification Test by 1 July or 90 days after hire
1.1.1 ASOS Sustainment	Provide monthly project summary test report, analyses, and data to the government if needed, as well as a report upon completion of major phase	On the agreed upon date defined in the MS Project Schedule and/or the Work Task Order.	Upon submission by due date and completion of one customer review
Task 1.1.2 ASOS System Testing/ASENSE	Daily status reports provided during testing.	<b>COB following day</b>	Upon submission
<i>Task 1.1.3 Reports</i>	Provide Weekly summary report on all surface systems work accomplished by individual	COB Thursday	Upon submission
Task 1.2.1 General Upper Air Test & Field Support	At least four SAIC personnel certified in taking upper-air observations.	Certified within 90 days of a new hire or 90 days from July 1.	Employees pass NWS qualification Test by 1 July or 90 days after hire
1.2.2 Conducting RRS System Tests	Weekly status reports	One day prior to TRG	Upon submission by due date and completion of one customer review

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1.2.3 RRS QPL Test Support	Provide test reports, analyses, and data to the government for the following tests: Phase II tests, Phase III tests	Phase II reports due 2 weeks after test completion. Phase III reports due 2 weeks after individual sites/tests, consolidated report 1 month after last site.	Upon submission by due date and completion of one customer review
1.2.4 Upper Air Analysis Tools	Upper-air MYSQL database	Preliminary database with government provided predefined queries/reports due December 30, 2009.	Upon submission by due date and completion of one customer review
1.2.5 Reports	Provide Weekly summary report on all surface systems work accomplished by individual	COB Thursday	Upon submission
Task 1.3.1 COOP QPL Test Support	Weekly reports for the FPR COTS evaluation.  Provide test reports, analyses, and data upon completion of major phase.	Weekly-Friday of same week.  On the agreed to date defined in the MS Project Schedule and/or the Work Task Order.	Upon Submission  Upon submission by due date and completion of one customer review
1.3.2 Temperature Sensor Testing	Provide test reports, analyses, and data upon completion of major phase	On the agreed to date defined in the MS Project Schedule and/or the Work Task Order.	Upon submission by due date and completion of one customer review
1.3.3 Evaluation of Cotton Region Shelters	Provide test reports, analyses, and data upon completion of major phase  Install a cotton region shelter at the SFSC	On the agreed to date defined in the MS Project Schedule and/or the Work Task Order. Installation will occur no later than 7 days after receipt of assets.	Upon submission by due date and completion of one customer review  Written concurrence by the TM that the unit has been properly installed




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1.4.1 Surface Systems Maintenance and Upgrade Support	Maintenance records and PM scheduling	PM schedules will occur in accordance with technical manuals. Records submitted by next business day..	Maintenance satisfactorily completed on time and records on time.
1.4.2 Upper Air Site Maintenance	Maintenance records and PM scheduling	PM schedules will occur in accordance with technical manuals. Records submitted by next business day..	Maintenance satisfactorily completed on time and records on time.
1.4.5 Test Chambers Evaluations	Report on evaluations of each major test chamber (maximum 10 pages)	Oct 15, 2009	All reports, upon submission by due date and completion of one customer review
1.4.6 Property Management	Annual inventory	In accordance with NWS requirements.	Upon submission by due date and completion of one customer review
1.4.9 General Infrastructure Support	Work areas clean and organized	Upon completion of any task, work area must be cleaned within 1 day.	Upon satisfactory inspection by SAIC lead or TM
1.4.10	Upper Air Data Base Complete Sensor Database	Due 1 December 2009. Due 30 May 2010	Upon satisfactory test run of data base
	<b>CLIN 1A</b>		
Task 2.0 Travel, Training, and Software Buys	Trip Reports	Received by TM NLT 10 working days after return	Upon Submission
	<b>CLIN 2</b>		
Task 3.1, <u>Ceillometer Sub-Visible Ice Crystal Study</u>			

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3.1.1	Install ceilometer and expand DAS at Bismarck	August 17, 2009	Upon completion of trip report and satisfactory operation of equipment
3.1.2	Install ceilometer and DAS at Aberdeen	Sept. 14, 2009	Upon completion of trip report and satisfactory operation of equipment
3.1.3	Interim ceilometer performance reports	Oct. 15, 2009 Nov. 13, 2009 Jan. 15, 2010 March 15, 2010 May 14, 2010	Upon submission and completion of one customer review
3.1.4	Presentation of interim ceilometer performance report	Oct. 29, 2009 Nov. 27, 2009 Jan. 29, 2010 March 29, 2010 May 28, 2010	Delivery of pre-brief and upon Presentation
3.1.5	Final report and analysis of ceilometer performance	June 15, 2010	Upon submission and completion of one customer review
3.1.6	Presentation of final report on ceilometer performance	June 29, 2010	Delivery of pre-brief and upon Presentation
<b>3.2 AWPAG Transfer Function Development</b>			
3.2.1	Install AWPAG at NCAR Marshall Test Facility in Colorado	October 5, 2009	Upon completion of trip report and satisfactory operation of equipment
3.2.2	Interim report on AWPAG transfer function development based on 2009-2010 winter season	Jan. 29, 2010	Upon submission and completion of one customer review
3.2.3	Presentation of interim report on AWPAG transfer function development	Feb. 12, 2010	Delivery of pre-brief and upon Presentation

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3.2.4	Final report and analysis of AWPAG transfer function development	May 14, 2010	Upon submission and completion of one customer review
3.2.5	Presentation of final report on AWPAG transfer function development	June 2, 2010	Delivery of pre-brief and upon Presentation
<b>Task 3.3 EPI activities</b>			
3.3.1	Test Plan for testing hail detector and hail pads in the lab and in the field	August 30, 2009	Upon submission and completion of one customer review
3.3.2	Install one prototype hail detector at CoCoRAHS site and one at Sterling for field testing	Sept. 1, 2009	Upon completion of trip report and satisfactory operation of equipment
3.3.3	Testbeds and DAS configured for field test of COTS EPIs sensors at Sterling and Johnstown	July 31, 2009	Upon completion of trip report and satisfactory operation of equipment
3.3.4	Test Plan for evaluation of performance of COTS sensors at Sterling and Johnstown and CoCoRAHS site	July 31, 2009	Upon submission and completion of one customer review
3.4.1	Johnstown testbed documentation updated as need after upgrades or modifications	15 working days after completion of upgrade/modification	Upon submission and completion of one customer review
3.5.1	Return of ceilometer equipment from Mount Washington Observatory	August 31, 2009	Upon receipt of the returned equipment in good condition and submission of the trip report.
3.6.1	Return of ceilometer equipment from Fairbank, Alaska	August 31, 2009	Upon receipt of the returned equipment in good condition and submission of the trip report.

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3.7.1	Klett Software final analysis and final report	May 05, 2010	Upon submission and completion of one customer review
<b>CLIN 2A</b>			
4.0 Travel, Training, and Materials	Travel/Trip Reports	Received by TM NLT 10 working days after return	Upon Submission



# Task Order 8 Modification for Contract Year 5

Title of Task Order:	Technical support services for the Sterling Field Support Center
OPS Branch:	Observing Systems Branch (OPS22) / OPS52
Performance Period:	Base – July 1, 2009 - Sept 30, 2009 Option 1 – Oct. 1, 2009 - Dec. 31, 2009 Option 2 – Jan. 1, 2010 - March 31, 2010 Option 3 – April 1, 2010 - June 30, 2010
Task Order Type:	CLIN 7 SFSC Operations Labor – FFP CLIN 7A SFSC Travel & ODCs – CPFF CLIN 9 ASOS PI Labor – FFP CLIN 9A ASOS PI Travel & ODCs – CPFF
Purpose: (How this TO relates to OPS's Mission or What Problems need to be solved)	<p>The Office of Operational Systems (OOS) is responsible for many fielded operational observation networks and observing systems. Within OOS, the Field Systems Operations Center (FSOC) is responsible for managing the Automated Surface Observing System (ASOS), the Cooperative Observer Program (COOP) Fischer Porter Rebuild kits, and systems associated with the upper air program. The Observing Systems Branch (OSB) within FSOC is responsible for management of the above-mentioned programs from an operational perspective along with the Sterling Field Support Center (SFSC) located in Sterling, Virginia. Until recently, the SFSC functioned mostly as a test facility for in situ sensors and measurements with some support for developing specifications and some field support.</p> <p>As certain activities begin spinning down in the area of ASOS product improvement, the National Weather Service (NWS) Headquarters (HQ) has requested FSOC begin supporting the ASOS Sustainment effort, and take a more active role in the area of field support. Thus with the commissioning of the RRS systems beginning in July, the SFSC will begin developing a help desk function to support the Commissioned RRS systems and sites which have the Fisher and Porter Rebuild. SFSC will also continue to support current and future activities of the other offices within the NWSHQ such as the Office of Science and Technology ASOS Product Improvement (ASOS PI). The ASOS PI support will consist of sensor testing and algorithm development.</p>
Background:	The SFSC supports NWS operations. This includes field support activities, testing of new surface, upper air and climatological equipment as well as ECP testing of changes to legacy systems. Additionally, this may include data continuity studies, which evaluate the impact a change has on an observing network. Tasking for these activities can come from any organization within the NWS; however, the principal customers are the Office of Operations Systems (OOS)

which SFSC is a part of, the Office of Science and Technology, the Regional Headquarters, and all Weather Service Forecast Offices (WFO). The Government TM or his designee is responsible for directing all tasks and setting priorities under this task Order. Any changes in relation to price, schedule, or performance will only be authorized by the Contracting Officer. The contractor shall be responsive to all tasks assigned to it under this Task Order.

For this contract period the contract support will be divided into two CLINS. CLIN 7 will be FFP SFSC Operations and CLIN 9 ASOS PI which will also be FFP. Each CLIN will have a sub CLIN for travel, training and ODC.

The tasks outlined in this document apply to the Sterling, and Johnstown facilities, and any future sites selected by the Government to support future SFSC operations.

The following information is provided as background concerning some of the systems/networks supported.

Technical support for Surface Observing Systems is the Automated Surface Observing System (ASOS). The ASOS is the nation's primary land based surface weather observing network. It is a joint DOC/DOD/DOT project with over 1000 observing systems. The ASOS Product Improvement Program is designed to improve maintainability, measurement quality and utility, and ensure the requirements for NWS & Aviation forecasts are met. Other surface systems will be supported as requested by the TM.

COOP FPR technical support includes the nationwide network of sensors that record weather information for use in the climate community. The sensors record a variety of meteorological measurements including temperature, dew point temperature, and precipitation accumulation. The COOP program currently uses a Fischer and Porter (FP) rain gauge for measuring precipitation accumulation every 15 minutes. The current sensor uses a paper tape punch mechanism that is obsolete and the information it records can be hard to collect. Therefore, the NWS has undertaken a FPR to replace the tape punch mechanism with a device that will have digital data recording and reporting capabilities.

For the technical support for Upper Air Observing Systems, the NWS supports 102 Upper Air sites in its network. Of these, 40 are MicroART, 3 are Sippican W9000 systems, the remaining sites are Radiosonde Replacement Systems (RRS), and 10 are CHUAS stations. All of these systems are supported by SFSC. These activities include

	<p>the implementation of improved upper air observing equipment including the surface observing equipment (supports upper air operations), upper air tracking systems, radiosondes, and associated data acquisition and communication systems. The SFSC will also support Alaska region in developing a plan to demonstrate the feasibility of using a hydrogen generator at select sites within the region, and prepare for conducting RRS data continuity test.</p> <p>The lead Technical Manager (TM) at Sterling is Jim Fitzgibbon (NWS), Phone (703) 661-1243 Cell (301) 448-6609. Back up TM will be Jennifer Dover, (703) 661-1259.</p>
Scope of Effort:	<p>Under the direction of the Government TM or his designee, the Contractor shall provide technical support services for all tasks under this task order. The Government TM or his designee is responsible for assigning all tasks and setting or changing priorities as long as price, schedule and/or performance are not affected. The Contractor is responsible for coordinating task activities and for reporting the completion of all milestones in accordance with agreed to schedules. There will only be one team lead that will perform management of the contract staff. Since the group is so small the administrative support for the team can be shared by the team lead and the individual team members, thus no dedicated administrative personnel is required. To capture the day to day tasking the existing work request form will be used. If the Contractor has a question or concern about a particular work request it will be brought to the attention of the requestor and/or TM for discussion and resolution. Once a work request is completed the requester and TM will be notified. Prior to a due date if it becomes apparent the due can not be met, the contractor will notify the requester and TM.</p> <p>The contractor shall provide algorithm development support, perform equipment maintenance on test infrastructure, perform test bed upgrades, and provide meteorological observations (surface, climate, and upper air) during significant weather events and as scheduled to meet test requirements. The Sterling Field Support Center activities also include operational support for NWS observing systems, including the deployment and initial issue of new equipment, software/firmware, and modifications. Because the exact schedules and milestone cannot be pre-determined in most cases, the Contractor shall prepare task plans, staff work assignments, projected schedules (MS Project) for completion for each work assignment and deliver these to the government TM for approval on a weekly basis. Status reports documenting work in-progress or completed will be provided each week to the TM along with updated MS project schedules. Reports will be delineated by task and by individual and include a list of all</p>

	<p>action items as well as a list of work order created during the last week. The report will cover CLIN 7 and 9. The Government reserves the right to request re-assignment of Contractor staff if new or higher priorities exist as long as price, schedule and/or performance are not affected. The TM or his designee will hold a review and coordination meeting with the contractor's team leaders once a week to identify and communicate priorities.</p> <p>Contractor staff supporting the SFSC shall be multi-disciplined in terms of being able to work across system types, diverse technologies, and applications. All Contractor staff members are expected to work a normal five-day 8-hour/day week in accordance with the contract. Initially, when the help desk becomes operational the contractor will be required to cover the period of 6:00 A.M. to 10:00 PM Monday through Friday. The 6:00 A.M. to 10:00 PM coverage is expected to begin in December. Since actual calls to the help desk are expected to be limited personnel assigned a help desk shift are expected to perform their daily duties. In addition, during significant weather events assigned personnel may be required to work extended hours, including weekends. Maintenance staff shall be proficient in multiple platforms and systems. In execution of this task order, miscellaneous support is necessary. This support includes, but is not limited to, coordinating activities with the Government TM as appropriate, the development of test plans, test procedures and Standard Operating Procedures (SOP) for the maintenance and operation of equipment and observing practices, presentations, technical reviews, Environmental Compliance, Health and Safety; Training; Administration; Logistics; and Technical Training.</p>
Tasks:	<p><b>CLIN 7- SFSC Operations Labor</b>  <b>Firm Fixed Price</b>  <b>Period of Performance: July 1, 2009 to June 30, 2010</b></p> <p><b>1.0 SFSC Surface Testing &amp; Field Support</b>  <b>1.1 <u>General ASOS Test &amp; Field Support</u></b>  The contractor will provide support for general ASOS tests not covered under Product Improvement or System Tests, e.g., test of a replacement component. Support will also be provided to field and HQ units contacting the center with questions requiring a response. This activity may require travel to remote site to support the field or testing of systems. At least 4 contractor staff including the appropriate team lead should be certified to take surface observations and proficient in testing methodologies. Certification of personnel is to be in accordance with NWS policy and procedure. Personnel designated to take surface observations will be required to be certified within 90 days of employment or 90 days from July 1 for current employees. The contractor should</p>

have a designated person and process in place to quality control surface observations. Weather observations will be made on an as-needed basis during weather events that are expected to produce weather data that will help meet the goals of the testing programs. There will be limited surface observation take to support Clin 7.

**1.1.1 ASOS Sustainment**

The contractor will begin developing test plans and procedures for the evaluation of replacement ASOS sensors. In addition, the contractor will also support the ASOS Sustainment Team developing the replacement ACU/DCP.

**1.1.2 ASOS System Testing/ASENSE**

The contractor will support ASOS System tests including the use of the ASENSE sensor simulator at Sterling. El-Techs and scientist will be assigned to provide technical support, on an as-needed basis, to set up and perform ASOS system testing for new ASOS firmware loads before they are fielded at operational ASOS sites. This work will require scientist to perform test procedures for testing firmware changes, sensor upgrades, and software fixes when new firmware versions are released. It is anticipated that this testing will require approximately one week for minor software builds and 3 weeks for major software builds. The NWS is expecting 2 major builds and 3 minor builds. The contractor will conduct ASOS ST using the three test ASOS systems at Sterling and the ASENSE sensor simulator. This support also includes running and updating test procedures and test datasets to test the mathematical bounds of the ASOS algorithms being tested. Test Track will be used to document deficiencies.

**1.1.3 Weekly Reports**

All contractor personnel will provide input to weekly activity reports in paragraph form, through the assigned Lead. Weekly report shall also include weekly work acceptance form.

**1.2 Upper Air Testing & Field Support**

**1.2.1 General Upper Air Test & Field Support.**

The contractor will develop the plan to conduct as many as 450 radiosonde test flights, which can encompass nighttime as well as weekend operations. This includes multi-radiosonde releases. Test flights may be required at various sites away from Sterling requiring travel as requested by TM. The contractor will generate the procedures for certifying the contractor staff with use of the new hydrogen generator in accordance with NWS safety protocols. The contractor will test balloons in support of the NWS Balloon tests and support CHUAS test flights. At least 4 contractor staff will be certified in upper air and proficient in testing methodologies. Certification of personnel is to be in accordance

with NWS policy and procedure. Personnel designated to take Upper Air Observations will be required to be certified within 90 days of employment or 90 days from July 1 for current employees. The contractor should have a designated person and process in place to quality control Upper Air Observations.

**1.2.2 Conducting RRS System Tests**

The contractor will support and conduct System Tests for Build 2.0 software. This will require executing government-developed test procedures and providing Test Track deficiency reports as problems are found.

**1.2.3 RRS OPL Test Support**

The contractor will conduct testing of radiosondes from multiple vendors in order to place them on the Qualified Products List for the National Weather Service. In-depth testing will occur at the Sterling site which will include flights (day and night) and use of multiple environmental chambers. The government will coordinate flight test activities on ATM and snow-white capabilities. Testing will also involve traveling to different climatic regions in order to test the radiosonde in a wide variety of conditions which are seen operationally. Test teams consisting of one to two contract personnel are expected to travel to at least four sites. Duration on site is expected to be 25 days. This effort is expected to extend past the end of this contract year. At least two contractor staff will be required to demonstrate ATM activities proficiency to the Upper Air Manager within 90 days of employment or 90 days from July 1 for current employees.

**1.2.4 Upper Air Analysis Tools**

The contractor's computer personnel will upgrade software data analysis tools and procedures to automate the data collection and analysis. Experience with MYSQL is required to complete this task.

**1.2.5 Weekly Reports**

All contractor personnel will provide input to weekly activity reports in paragraph form, through the assigned Lead. Weekly report shall also include weekly work acceptance form.

**1.3 COOP Testing & Field Support.**

**1.3.1 COOP OPL Test Support**

The contractor will continue QPL qualification testing to compare the performance of rebuilt Fischer and Porter gauges (gauges that have been modified with installation of FPR kits) against the specification. An ASOS model OTT AWPAG located inside a DFIR will also be used as a comparison sensor for the outdoor performance testing. The contractor will receive COTS Fisher Porter rebuild systems and evaluate their performance along with government personnel. The contractor will also monitor

performance of these systems at Sterling and, other remote sites. The data will be analyzed using spreadsheets that contain metrics.

#### 1.3.2 Temperature Sensor Testing for the COOP network

The contractor will develop a test plan and procedures for the evaluation of temperature sensors which can be used in the COOP network. Testing is expected to begin in October. The procurement and testing of the sensors is expected to follow a QPL process.

#### 1.3.3 Evaluation of Cotton Region Shelters

The contractor will develop a test plan and procedures for the evaluation of cotton region shelters which can be used in the COOP network. Government will provide training in support of this effort.

### **1.4 SFSC Infrastructure Support**

#### 1.4.1 Surface Systems Maintenance and Upgrade Support

The contractor will perform maintenance and upgrades on legacy ASOS equipment and test-beds at the Sterling Facility. Maintenance actions are limited in time and amount to a quantity similar to previous years.

#### 1.4.2 Upper Air Site Maintenance.

The contractor will perform test site maintenance on existing Upper Air systems, test equipment, and support equipment at Sterling, Va. Maintenance actions are limited in time and amount to a quantity similar to previous years. The contractor will develop maintenance and operations procedures for the hydrogen generator including safety procedures to be used in the new balloon inflation building.

#### 1.4.3 Standard Operating Procedures.

The contractor will develop Standard Operating Procedures (SOPs) for operating and maintaining test assets, including the Sterling test chambers. The contractor will also prepare SOPs for conducting standardized and specialized tests. The contractor is authorized to have some SOP's contain NWS proprietary information, which will be identified as proprietary. **SOPs will be created on an as needed basis for the contractor to maintain proficiency. Before developing an SOP, it will be approved by the TM.**

#### 1.4.4 Test Hardware Maintenance

The contractor will ensure test systems in use are maintained and operational for tests.

#### 1.4.5 Test Chamber Evaluation

The contractor will conduct operational evaluations of existing chambers and develop a maintenance schedule for chambers and other test assets. The contractor will have at least two staff members proficient in the use of the wind tunnel and RH laboratory measurements.

#### 1.4.6 Property Management

The contractor will continue with providing property management support, shipping and receiving support and implement plan for tracking and verifying receipt of shipments of new equipment deployed to the field.

1.4.7 Computer/Network Maintenance

The contractor will provide general computer/network maintenance at the Sterling Facilities. This includes minor hardware, account setup, and installation of office application programs, and may include network assurance/security responsibilities for NWS required updates or modifications.

1.4.8 Installation, Operations, and Maintenance Document Reviews.

The contractor will assist in the development and review of documents associated with installation, operation, and maintenance of equipment. The contractor will assist in the development and review of documents associated with operations of existing/new equipment and the taking of observations.

1.4.9 General Infrastructure Support

The contractor will assist in developing a professional work environment; including the organization and cleaning of all SFSC test assets, the replacement/surplus of old and obsolete equipment and implement a clean-as-you-go concept.

1.4.10 Software/Database Support

Contractor will develop a database with user interface for queries to support the Radiosonde QPL process. Contractor will finish the relational database that stores all sensor (surface climate and upper air) and related data in the database. The database will support/automate data acquisition, data analysis and report writing

1.4.11 Customer Relations Support

The contractor will assist the Government in implementing the concept of the "Sterling Field Support Center" by fostering a symbiotic relationship with field sites and regional headquarters. This will allow for an exchange of information and ideas. This process will include site visitations/inspections by Sterling personnel and the hosting of field/regional personnel at Sterling to support operations. Proper phone etiquette will be used by all personnel.

1.4.12 Technical Support Desk.

The contractor will assist in the developing and establishing of the SFSC help desk. The contractor will assist field sites and headquarters personnel in the timely analysis of equipment and procedural problems. The contractor will assist in implementing solutions to problems. At times, this may require travel to a site to assist in the problem solving process or to implement a solution/problem work-around. The contractor will provide



emergency response to operational problems. This effort will initially be a part time effort anticipated to be one or two phone calls a day and one assist visit per quarter. The contractor will provide field support in responding to questions from the field and diagnosing problems which might arise. Contractor will review material and help plan for a web based support desk. Proper phone etiquette will be used by all personnel.

**CLIN 7A – SFSC Operations Travel & ODCs**  
**Cost Plus Fixed Fee**

**Period of Performance: July 1, 2009 to June 30, 2010**

**2.0 Travel, Training, and Software Buys**

The contractor will continue to provide program support that includes coordinating contractor travel and training at a level similar to previous years. Travel, training, and software procurements will be billed as other direct cost (ODC).

**CLIN 9- ASOS PI Labor**  
**Firm Fixed Price**

**Period of Performance: July 1, 2009 to June 30, 2010**

**3.0 ASOS PI Support**

**3.1 Ceilometer Sub-Visible Ice Crystal Study**

The study of the performance of the replacement ceilometer as it pertains to falsely detecting and reporting sub visible ice crystal layer formations will continue. A second ceilometer will be installed at the forecast office in Bismarck, ND, and a ceilometer will be installed at the forecast office in Aberdeen, ND. At Aberdeen, a DAS will be installed and at Bismarck the existing DAS will be used. The effort involved will include monitoring the climatology for conditions conducive to sub visible ice crystal layers and correlating these events to the ceilometer reports. The forecast office staff will contact SAIC to report conditions favorable to sub visible ice crystal layer formations.

**3.2 AWPAG Transfer Function Development**

The AWPAG transfer function development activity is to compare the catch in the standard ASOS AWPAG configuration (with Auxiliary 8 foot diameter Alter windscreen) to the catch of an AWPAG inside a Double Fence Intercomparison Reference (DFIR). The DFIR is designed to maximize catch and the ratio of the catch in the AWPAG with ASOS shield configuration to the DFIR catch is the transfer function. The ratio depends primarily

on wind speed and secondarily on temperature, so developing an equation relating the AWPAG/ DFIR ratio to wind speed and temperature requires long term field testing in a wide variety of conditions of wind and temperature. Data to support development of the transfer algorithm was collected at Sterling and the NWS test facility at Johnstown during contract year 04 (2008-2009). During contract year 05 (2009-2010) data will be collected from AWPAGs located at NCAR, Johnstown, and Sterling. NCAR currently has one AWPAG installed within a DFIR. The effort will be to install a second AWPAG with Auxiliary Alter screen at the NCAR site, and to collect the data from NCAR Data Acquisition Systems and develop the final transfer function algorithm structured English.

- AWPAG with new 8 foot diameter Alter shield installed at NCAR
- Collection of data from all three test sites
- Analysis of data, formulation of initial transfer algorithm, generate final report provide briefing of results.

### 3.3 EPI activities

EPI activities will be primarily directed at evaluation of COTS sensor performance, and developing hail detection reference capabilities. NASA has developed a hail detector which we will duplicate in-house or through a build-to-specification contract. It is anticipated that there will be a field test of EPI COTS/prototype sensors in mid-summer of 2010. Analyst/ clinical observer support will be required for observing in support of the field test.

- Modify DAS computer software to accommodate communication with COTS sensors
- Install COTS EPI sensors (estimated 4 sensors from 3 vendors at 2 locations)
- Conduct lab hail simulation tests to validate use of NASA hail detectors
- Conduct field test of hail detector to determine if performance in hail and heavy rain
- Evaluate available information, including the CoCoRAHS program for suitable venues for field testing in conjunction with NASA hail detector
- Update Test Plan for field test of COTS EPI sensors
- Conduct observations at Sterling and Johnstown to establish performance of COTS sensors
- Collect and evaluate data from remote sites where hail standard is installed
- Generate Interim and Final reports on COTS EPI performance

### 3.4 Maintenance of Johnstown Testbed

The National Weather Service has established a remote winter test site at the Johnstown, Cambria airport. The test bed and observation trailer must be maintained during the contract period. Periodic and impromptu maintenance and upgrades on current and future test equipment, to include computer support, will be performed. Travel will be required and charged under CLIN 9A.

### 3.5 Retrieval of Ceilometers and equipment from Mount Washington Observatory, NH

Testing of replacement ceilometers at Mount Washington has concluded. Two CL31 ceilometers, mounts and misc. equipment must be removed from the test venue and returned to Sterling.

### 3.6 Retrieval of Ceilometers and equipment from Fairbank, Alaska

Testing of replacement ceilometers at Fairbanks has concluded. Two CL31 ceilometers, mounts and misc. equipment must be removed from the test venue and returned to Sterling. To meet the delivery requirements for the ice crystal test installations, the Fairbanks retrieval should be planned for late July 2009.

### 3.7 LIDAR Klett Algorithm Activities

In the 2009 contract year the NWS and SAIC jointly developed very preliminary analysis software to be used in conjunction with the LIDAR raw output data to post-process cloud height information. This effort involved using high resolution data from the Sigma Space LIDAR in conjunction with a Klett algorithm to derive optical extinction coefficients which were then used to report cloud data. The NWS has determined that it will be necessary to complete the development and implementation of the Klett algorithm to support evaluation of the ASOS replacement ceilometer during compliance testing of the algorithm which will extend the ceilometer reporting range from 12,000 ft to 25,000 ft. Activities will be primarily software engineering efforts directed at completion of the Klett implementation and demonstration that it is effective. Travel is not anticipated for this effort. This effort includes:

- Modify existing Klett post processing algorithm to post process Sigma Space LIDAR raw output data.
- In conjunction with NWS, test the resulting Klett post processing algorithm.
- Deliver resulting software product.

**CLIN 9A- ASOS PI Travel & ODCs**  
**Cost Plus Fixed Fee**

	<p><b>Period of Performance: July 1, 2009 to June 30, 2010</b></p> <p><b>4.0 Travel, Training, and Materials</b>  The contractor will continue to provide program support that includes coordinating contractor travel and training at a level similar to previous years. Travel, training, and material/supply procurements will be billed as other direct cost (ODC).</p>
<p>Assumptions/  Constraints  (Security, Safety,  Accessibility, etc...)</p>	<ol style="list-style-type: none"> <li>1. Environmental Compliance, Health and Safety requirements must be observed at the Sterling and Johnstown Test Facilities. Training on these issues for Sterling personnel is to be included in the TO cost proposal under CLIN 7A, CPFF.</li> <li>2. General computer/network maintenance will be required at the Sterling Test Facilities. Costs for such support shall be included in the cost proposal under CLIN 7, FFP. The National Weather Service will be responsible for IT security and the update of systems and servers to meet NWS requirements.</li> <li>3. The Government to provide support for contractor personnel to receive training in the maintenance of Upper Air and ASOS equipment.</li> <li>4. The Government to provide support for contractor personnel to receive technical training for HR measurement.</li> <li>5. Government to coordinate/approve travel and training activities with appropriate Contractor personnel.</li> <li>6. All contractor personnel will follow DOC and NOAA IT Security Policy and the IT Security policy and procedures in the NWS Directives System. Contractor personnel will complete IT Security training and sign the NOAA Rules of Behavior for NOAA Information Systems. This will include policies specific the SFSC complex.</li> <li>7. For the purpose of estimating this Task Order, assume a maximum number test flights conducted by contractor will be 450.</li> <li>8. The Government requires that at least one contractor be qualified on RRS maintenance and one contractor be qualified on MicoArt maintenance. This person may achieve their qualification during the period of performance.</li> <li>9. The Government requires that at least four contractors be certified to take Upper Air observations.</li> </ol>

	<p>10. The Government requires that at least four contractors including the appropriate team lead be certified to take surface observations.</p> <p>11. No telework is allowed on this contract. Alternate work schedule is authorized, as appropriate, with core hours between 9:00 AM and 2:00 PM Monday through Friday. Sterling lead should coordinate to ensure adequate coverage to meet mission requirements.</p> <p>12. The contractor is to follow Government guidelines in the event of weather or other emergencies. Meaning, if the Government personnel at Sterling are notified of a liberal leave policy for bad weather or other emergencies the non-essential contractor personnel may follow the same policy of using their personal leave if they feel it is unsafe to come to work. If the Sterling facility is closed due to weather or other emergencies Federal and contractor non-essential employees may take administrative.</p> <p>13. Essential contractor personnel are defined as meteorologists on observational duty for surface and/or upper air programs.</p> <p>14. The Government is identifying the following positions as key personnel in this task order and reserves the right of approval on personnel selected to fill these positions upon vacancy. Further, these positions should be filled as referenced in section H13 of the basic NDBC Technical Service Contract.</p> <p>Key Positions: Sterling Lead Senior Meteorologist Senior Software Engineer</p>
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**Deliverables:**

Deliverables	Due Date
<b>CLIN 7 SFSC Operations Labor</b>	
1.1 At least four contractors certified in taking surface observations.	Certified within 90 days of a new hire or 90 days from July 1.
1.1.1 Provide test reports, analyses, and data to the government.	On the agreed to date defined in the MS Project Schedule and/or the Work Task Order.
1.1.2 Daily status reports provided during testing.	COB following day

	1.1.3 Provide weekly status reports.	Weekly-Thursday of same week.
	1.2.1 At least four contractors certified in taking upper-air observations.	Certified within 90 days of a new hire or 90 days from July 1.
	1.2.2 Provide test reports, analyses, and data to the government.	Weekly status reports provided one day prior to TRG meetings.
	1.2.3 Provide test reports, analyses, and data to the government for the following tests: Phase II tests, Phase III tests	Phase II reports due 2 weeks after test completion. Phase III reports due 2 weeks after individual sites/tests, consolidated report 1 month after last site. Weekly status reports provided one day prior to TRG meetings.
	1.2.4 Development of upper-air MYSQL database	Preliminary database with government provided predefined queries/reports due December 30, 2009.
	1.2.5 Provide weekly status reports.	Weekly-Thursday of same week.
	1.3.1 The contractor will prepare weekly reports for the FPR COTS evaluation. Provide test reports, analyses, and data to the government.	Weekly-Friday of same week.  On the agreed to date defined in the MS Project Schedule and/or the Work Task Order.
	1.3.2 Provide test reports, analyses, and data to the government.	On the agreed to date defined in the MS Project Schedule and/or the Work Task

		Order.
	1.3.3 Provide test reports, analyses, and data to the government. In addition, the contractor will install a cotton region shelter at the SFSC.	On the agreed to date defined in the MS Project Schedule and/or the Work Task Order. Installation will occur no later than 7 days after receipt of assets.
	1.4.1 Maintenance records and PM scheduling.	PM schedules will occur in accordance with technical manuals. Records submitted same day as completed.
	1.4.2 Maintenance records and PM scheduling.	PM schedules will occur in accordance with technical manuals. Records submitted same day as completed.
	1.4.5 Wind tunnel and RH laboratory evaluation.	Oct 15, 2009.
	1.4.6 Complete annual inventory.	In accordance with NWS requirements.
	1.4.9 General housekeeping.	Upon completion of task, work area must be cleaned within 1 day.
	1.4.10 1. Upper air database should be completed. 2. Complete sensor database.	1. Due 1 December 2009. 2. Due 30 May 2009.
	1.4.11 Phone etiquette.	Proper etiquette will be implemented on every call.
	CLIN 7A SFSC Operations Travel & ODCs	
	2.0 Travel/Trip reports	Received by TM NLT 10 working days after return
	CLIN 9 ASOS PI Labor	

	3.1.1 Install ceilometer and expand DAS at Bismarck	August 17, 2009
	3.1.2 Install ceilometer and DAS at Aberdeen	Sept. 14, 2009
	3.1.3 Interim ceilometer performance reports	Oct. 15, 2009 Nov. 13, 2009 Jan. 15, 2010 March 15, 2010 May 14, 2010
	3.1.4 Presentation of interim ceilometer performance report	Oct. 29, 2009 Nov. 27, 2009 Jan. 29, 2010 March 29, 2010 May 28, 2010
	3.1.5 Final report and analysis of ceilometer performance	June 15, 2010
	3.1.6 Presentation of final report on ceilometer performance	June 29, 2010
	3.2.1 Install AWPAG at NCAR Marshall Test Facility in Colorado	October 5, 2009
	3.2.2 Interim report on AWPAG transfer function development based on 2009-2010 winter season	Jan. 29, 2010
	3.2.3 Presentation of interim report on AWPAG transfer function development	Feb. 12, 2010
	3.2.4 Final report and analysis of AWPAG transfer function development	May 14, 2010
	3.2.5 Presentation of final report on AWPAG transfer function development	June 2, 2010
	3.3.1 Test Plan for testing hail detector and hail pads in the lab and in the field	August 30, 2009
	3.3.2 Install one prototype hail detector at CoCoRAHS site and one at Sterling for field testing	Sept. 1, 2009
	3.3.3 Testbeds and DAS configured for field test of COTS EPIs sensors at Sterling and Johnstown	July 31, 2009



	3.3.4 Test Plan for evaluation of performance of COTS sensors at Sterling and Johnstown and CoCoRAHS site	July 31, 2009
	3.4.1 Johnstown testbed documentation updated as need after upgrades or modifications	15 working days after completion of upgrade/modification
	3.5.1 Return of ceilometer equipment from Mount Washington Observatory	August 31, 2009
	3.6.1 Return of ceilometer equipment from Fairbank, Alaska	August 31, 2009
	3.7.1 Klett post processing software test begin	December 21, 2009
	3.7.2 Klett Software testing completes	February 10, 2010
	3.7.3 Klett Software final analysis and final report	May 05, 2010
	CLIN 9A/ASOS PI Travel & ODCs	
	4.0 Travel/Trip reports	Received by TM NLT 10 working days after return
GFE/GFI:	GFE/GFI is available to support this effort. The Contractor may purchase equipment under the ODC expenses with approval of the Government TM.	
Program Objectives/ Possible Performance Measures:	The Government requires this task order have performance-based measures that align with the Statement of Objectives and Program Goals contained in this solicitation. The contractor is required to provide a list of proposed measures for this task order with goals for level of service and the outcomes for achieving/not achieving those goals.	
Inspection/Acceptance:	Final inspection and acceptance of all work performed, reports generated, and other deliverables will be conducted by the Government TM or other designee.	
Travel:	Travel is required to support this task order. All travel expenses must comply with the Federal Travel Regulations. SAIC travel and training will be billed as ODC expenses under CLIN 7A or 9A depending on the purpose. Prior Government approval is required for all travel, training, and ODCs with the exception of weather observations at Johnstown driven by weather events. The authorizing Government officials for SAIC travel are Jim Fitzgibbon for and Jennifer Dover. When possible, at least two weeks in advance of anticipated travel the	

	Contractor shall notify the authorizing Government official. This person will email an authorization/request for travel to Regina Moore (NDBC) and appropriate SAIC staff. In those cases where the travel is organized around a weather event or an operational emergency, authorization may occur on the same day the travel is expected to occur. Since a large portion of the travel will be short notice type travel, funding for travel will be allocated on not less than a quarterly basis to the appropriate accounts.
Required information and/or submittals to be included in the required Task Management Plan (TMP):	<ol style="list-style-type: none"> <li>1. Task Management Plan (TMP) <ol style="list-style-type: none"> <li>a. Work Breakdown Structure (WBS)</li> <li>b. Performance Specifications and Metrics</li> <li>c. Cost, Schedule and Performance Metrics</li> </ol> </li> <li>2. Task Order Cost Proposal must be broken into 2 CLINs (7 &amp; 9) each with a sub-CLIN (7A &amp; 9A) for travel and ODCs. The Cost Proposal should be further broken down into contract year quarters with the base period being the first quarter of contract year 5 and each of the remaining quarters as option periods.</li> </ol>